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ABSTRACT

Culture and language establish a peoples' identity, setting them apart as a people and providing a sense of belonging and purpose. Their language embodies a people's world view, expressing the values they consider important for physical and spiritual survival. Students are greatly influenced by their native culture. For the Ojibwe, culture plays an important role in their lives and this should be evident in the core curriculum of their schools. Unfortunately, this has not been the case for the Ojibwe. The Ojibwe Language Institute was initiated on the assumption that knowledge and understanding of the Ojibwe language and culture would help teachers to better assist their students. The intent of the 1987 institute was to develop a science curriculum from the Ojibwe perspective. The goals of this program included helping students to become aware that science has always been a part of the Ojibwe way of life, to develop cognitive skills, to develop a positive self-esteem, and to gain a pride and understanding of their heritage. Topics covered in this curriculum include life cycles, the water cycle, food production, trees, and the seasons. The lesson plans within each topic include lists of concepts, grade level, objectives, vocabulary, suggested references, and ideas for class and individual activities. Content, cognitive and language emphases are highlighted. (CW)

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CYCLES OF LIFE AMONG THE OJIBWE

AN OJIBWE LANGUAGE AND CULTURE BASED

SCIENCE CURRICULUM

Developed by

The Participants of The

1987 OJIBWE LANGUAGE INSTITUTE

Duluth, Minnesota

edited by

AnCita Benally
Mountain States Multifunctional Resource Center

Joel D. Longie, Ed.D.
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THE UNIVERSAL CYCLE OF LIFE

The world operates in a universal cycle. All components and aspects of life revolve in cycles. This allows for continuity and maintenance of all forms of life.

All components of this universai cycle are interactive and interdependent. Each is an integral part of the universal cycle. Each has its purpose in the continuity of life. All interact to help others complete their cycles.

All components of life are connected, and thus each must complete its cycle and fulfill its purpose. When all fulfill their purposes and function as intended, there is balance and harmony.

Humanity is a part of this universal cycle of life. It is neither less nor greater. Humanity is responsible for caring for the environment, respecting it, using its resources wisely and doing its part to maintain balance and harmony.

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FORWARD

The Upper Great Lakes Multifunctional Resource Center and the Mountain States Multifunctional Resource Center are two of sixteen regional resource centers funded under contract with the U. S. Department of Education with funds provided by the Office of Bilingual Education and Minority Language Affairs. The mission of these centers is:

> The provision of inservice training and technical assistance to parents and educational personnel participating in, or preparing to participate in, bilingual education programs or special alternative programs for limited English proficient students (Public Law 98-511, Section 741, a, 5).

Administered by the University of Wisconsin-Madison under contract no. 300860050, the Upper Great Lakes MRC has an additional two ancillary mission statements. The first is meant to specify the content of the MRC's services; and the second is derived from the MRC's assigned area of specialization:

> To base Center services upon the interpretation of developing research and practice which, when broadly construed, have implications for the education of LEP students.
>
> To provide national and regional leadership in the mathematics and science education of LEP students.

Administered by Arizona State University under contract number 300860053. The Mountain States MRC has been assigned literacy as an area of specialization. Under a previous contract between Arizona State University and the United States Department of Education, OBEMLA, which authorized the National Indian Bilingual Center, the Ojibwe Language Institute was conceived. It seemed appropriate and cost effective that this collaboration of science and literacy efforts between the existing MRC be continued and culminate in the production of this science curriculum guide.

In the process of providing services, MRC staff find themselves in situations where they must review extant literature, pull together resources, and/or produce documents and materials which support their efforts. This manuscript is an example of one such effort. It is the compilation of a series of training activities which took place during the Third Annual Ojibwe Language Institute in Duluth, MN, from July 6-17, 1987.

The Ojibwe Language Institute began in 1985 as a collaborative effort involving the LEP Education Unit and the Indian Education Section of the Minnesota Department of Education, the Ojibwe Language Bilingual Teacher Training Program at the College of Saint Scholastica, the Midwest Bilingual Education Support Center, the National Indian Bilingual Center, and local districts involved in the education of Indian students. Since its beginning, the Institute has held winter as well as summer meetings. It has grown, adding participants and developing participant expertise in areas such as the linguistics of the Ojibwe language, instruction of Indian children, and curriculum development.

For the 1987 Institute, the planning committee included Jessie Montaño, Nora Hakala, and Vernon Zacher from the MN Department of Education, Sister Claire Trettel and George Lokken from the College of Saint Scholastica, Lester Jack Briggs from the Rainy River Community College System, Mushkuoub from the Fond du Lac Ojibway School, Joel Longie and Walter Secada from the Upper Great Lakes MRC. It was decided to focus the 1987 Institute on three interrelated strands: the development Ojibwe bilingual education, ongoing training in the Ojibwe language, and the development of curriculum focused on science from an authentic Ojibwe perspective.

Over the course of 2 weeks, Institute participants were involved in Ojibwe language lessons, curriculum development efforts, and ongoing discussions about the role of bilingual education within Indian education. To develop curriculum, participants formed into teams and worked on units and lessons in science. A highlight of the Institute was the sharing and co-teaching of science lessons among the various teams.

The Institute profited from the participation of its presenters. Ms. Aida Walqui provided two full days of training on the background to and issues in Indian bilingual education. She drew upon the experiences not only of tribes from the United States, but also, from her own research among Peruvian Indian tribes. Ms. Faye MacAlear, from the Office of Bilingual Education and Minority Language Affairs, provided encouragement and brought the message of the Department of Education's concern for the education of Indian students. Earl Nyholm conducted morning sessions on the linguistic aspects of the Ojibwe language. AnCita Benally and Joel Longie worked with the participants to facilitate the curriculum development efforts. They were helped by Jerilyn Grignon, a graduate student at the University of Wisconsin-Madison.

Moreover, AnCita and Joel collected the notes and ideas which had been shared during the Institute and took upon themselves the task of editing them into this manuscript. This manuscript, therefore, represents an effort to keep the collective memory of an extended activity available not only to those who participated in that effort, but also to others who did not.

This manuscript is a first step. By no means should it be taken as a completed science curriculum. In two weeks, it is simply not possible to finish the development of one. Rather, this manuscript contains ideas, it shows directions on how a science curriculum eventually might be done. It shows how something as seemingly objective as science contains cultural elements, and how science might be adapted to include those elements which are important to Indian culture. It is our hope that others who are involved in the education of Indian students will be inspired by this effort to adapt these and to develop their own ideas. For example, if users of this manuscript decide to develop some of its concepts to their more formalized end points, they will need to extend some of the activities and to draw distinctions between relationships in time versus relations of cause and effect more strongly. Others may decide to adopt these ideas in more of a language experience approach. In any case, we hope that this effort will lead to improved science teaching for Indian children. Science is too important to be left out of their lives.

The art for the cover was created by Mr. John Kakaygeesick. Maricela Jimenez and Nancy Littel entered the original manuscripts into usable and readable word processing format. They toiled through revisions, updates and at least one major computer snafu, all in good spirits. Professor James Stewart, in Science Education from the Department of Curriculum and Instruction at the University of Wisconsin-Madison, graciously reviewed this manuscript to ensure accuracy of basic scientific concepts. Finally, we should acknowledge, once again, the efforts of Joel Longie and especially of AnCita Benally who worked during her vacation preparing for the Institute and who took major responsibility for ensuring that this project was done. Without their efforts, this project would never have been complete.

August, 1988

Walter G. Secada, Director
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INTRODUCTION

Along with culture, language establishes a people's identity setting them apart as a people. It provides a sense of belonging and a sense of purpose. Language embodies a people's world view, expressing the values they consider most important for physical and spiritual survival. It is one means of carrying on cultural practices and ideas. It is one of the most valuable cultural components a society can have. Without it a culture and its people lose much of their identity and sense of purpose.

Language and culture have tremendous impact on learning and cognitive styles. How the culture views the world and organizes it for understanding influences how people will learn and process their thinking. Though a language may be diminishing, much of the manner of processing information and learning will linger and influence several generations to come.

Although many do not speak the language fluently, the Ojibwe language has strongly influenced Ojibwe students. Language patterns based on Ojibwe have been passed down from generation to generation, thus influencing how today's students use English, how they process information, and how they learn.

Students are also influenced greatly by their native culture. Ojibwe culture plays a prominent role in their lives. Many cultural customs and practices are carried on constantly. Ojibwe values and concepts are taught to them daily. These ideas and practices have an impact in all areas of their lives including schooling.

Ideally a school should reflect the values and concepts of the community it serves. It should reinforce values and concepts most important to the child's culture and society. The core curriculum, should teach students about their culture, their history and their language.

Unfortunately for the Ojibwe student this has not been the case. Usually students are not provided the opportunity to study academic subjects through familiar content materials. Instead they must learn through curriculum designed for the non-Ojibwe.

The Ojibwe Language Institute was initiated on the assumption that knowledge and understanding the Ojibwe language and culture would help teachers be better able to assist their students. It is designed to train teachers to develop relevant curricula for their students. It is also intended that teachers be able to help their students become better scholars in English by understanding the Ojibwe language. In addition, having an understanding of the language and culture would promote student self-esteem and self-identity as well.

There have been two components to the Ojibwe Language Institute, linguistics and curriculum development. Linguistics instruction is provided by an Ojibwe-speaking linguist. Participants study the syntax, morphology, orthography, and oral expressions of the language. The study is in-depth and much cultural information is passed on.

A second component consists of curriculum development. Participants are provided with information and training in teaching techniques, child development, curriculum models and an opportunity to develop unit and lesson plans. At the end of the session participants are given the additional opportunity to teach one of their lessons to the group.

The content focus for the 1987 Ojibwe Language Institute was science. Participants use science to teach Ojibwe language and culture. The intent was to teach science from the Ojibwe prospective.

Each year the Institute strives to provide maximum training and assistance in the time allotted. It has been successful each year. Participants have completed the session with expanded knowledge and improved skills.

August, 1988

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RATIONALE

The Ojibwe Language Institute's science curriculum is based on the premise that Ojibwe culture offers rich sources of knowledge and understanding. The culture has always been as one with the environment and has developed a unique understanding of how to interact with it. Science is very much a part of the Ojibwe's world both past and present.

A science curriculum based on the values and concepts of the Ojibwe culture can provide a means for Ojibwe children to learn about themselves and their heritage while developing self-identity and self-respect. At the same time, cognitive, affective, social/cultural and language skills can be learned.

Ojibwe children are familiar with their community's environment. And, while the culture has gone through many changes, it is still active and viable. Much of the culture's understanding of the environment is still used and adhered to. With the familiarity students have of this, it is expected that they will be more responsive to an Ojibwe, culture-based science curriculum.

This curriculum is designed to bring knowledge and awareness of Ojibwe values and concepts while helping students become confident, successful contributors to their society. It is also designed to help students become more academically progressive and successful. It is hoped that through this, as adults, students will be better able to deal with two ways of thinking, believing and doing.

GOALS AND OBJECTIVES OF THE OJIBWE SCIENCE CURRICULUM

There are several major goals of this curriculum project. It is hoped that each of them would help students improve their English proficiency and their academic achievement. The most important goal, is to help students become confident adults who have pride in what they are and who know who they are. This curriculum hopes to instill in students pride, respect, and understanding for the values and concepts of their cultural heritage.

Through study of the Ojibwe Language students will become more proficient in English. By becoming aware of Ojibwe and English language differences they will understand each language better and thus become better communicators in each.

By study of science through Ojibwe culture and the environment of the Ojibwe students will understand their native culture better. And, because they are familiar with the content of the lessons they will be more receptive to learning.

Students will become aware that science is and has always been an important part of the Ojibwe way of life. By using Ojibwe ideas students will come to understand that science is not alien to the Ojibwe world view.

Students will develop positive self esteem and a sense of identity because they will develop a better understanding of their cultural and linguistic heritage.

Students will develop cognitive skills that will help them in all areas of their schooling.

Students will gain pride in their heritage, in themselves and in their people. They will learn positive aspects of their history, their culture and the values and concepts of their society.

By studying about their culture, students will be better able to live in a bicultural and bilingual setting.

Students will gain awareness that the language and culture of their heritage is a unique and special one. Thus, through this awareness they will have appreciation for their past and their present.

UNIT PLAN - GROUP I

UNIT: THE OJIBWE WAY OF LIFE AMONG THE ELEMENTS

THEME:

With the completion of nature's cycles, the earth is renewed and rejuvenated. The various cycles completed themselves, nature offered benefits to the Anishinabe that insured comfort, luxury, survival, and spiritual security. People depended on these gifts and learned to use them in many ways and to the greatest extent possible.

CONCEPTS:

1. Universal Cycle of Life: Everything revolves in a cycle, insuring renewal, rejuvenation and continuity for all life.

2. Interaction: The various elements of nature act together to complete each others cycles as well as Mother Earth's.

3. The various cycles of Mother Earth, the stars, sun and moon, bring the Ojibwe people four seasons.

4. The universal cycle makes it possible for the environment to continue its existence.

GOALS:

1. Students will learn to respect and appreciate Mother Earth and her elements.

2. Students will recognize that there is balance and order in nature.

3. Students will recognize and be aware of various elements (air, wind, water and fire) and their cycles.

4. Students will develop proficiency in Ojibwe oral language skills with vocabulary associated with the elements in the environment.

5. Students will recognize the role of animals in the Cycle of Life.

OBJECTIVES:

1. After studying the Universal Cycle, students will respect and appreciate Mother Earth in her spring, summer, fall, and winter Cycles. They will demonstrate this by explaining the symbolic representation of the circle.

2. Through study of the life cycle of animals, students will develop respect and an appreciation for the importance of animals in the Universal Cycle of Life.

3. Students will develop oral and comprehension skills by pronouncing as accurately as they can Ojibwe words and using them properly.

ACTIVITIES:

1. Optional: Go on a field trip to the Mille Lac's Museum and view the exhibit of the Four Seasons.

2. Bring elders into the classroom from the community to share their knowledge of the Cycle of Life.

3. View filmstrip, "Life Through the Seasons," from the Ojibwe Educational Kit.

4. The student will make a directional chart, by using cut outs from magazines to illustrate their understanding of the Cycle of Life.

5. The class will have a group discussion, sharing their knowledge of the Universal Cycle and the Ojibwe way of life among the elements.

VOCABULARY LIST: (All Lessons)

Directions

waabanong	-	east
zhaawanong	-	south
ningaabi'anuong	-	west
giiwedin	-	north

Time of Day

gigizhebaawagad	-	morning
naawakwe	-	noon
onaagoshin	-	evening
aabitaa-dibakad	-	midnight

Seasons

ziigwan	-	spring
niibin	-	summer
dagwaagin	-	fall
biboon	-	winter

Colors

ozaawaa	-	yellow
miskwaa ozhaawashkwa	-	red/green
makadewaa	-	black
waabishkaa	-	white

Life Stages

ondaadiziwin	-	new birth
oshki anishinaabe	-	adolescent
gichianishinaabe	-	adulthood
(or)	-	elder
gete anishinaabe		

Animals

migizi	-	eagle
amik	-	beaver
makwa	-	bear
waawaashkeshi	-	deer

Gifts

gidapiitenimin	-	trust
zaagi'iding	-	love/compassion
nandagikendam	-	searching/seeking
gikendamoowin	-	wisdom

Special Terms

ishpiming	-	up
naazhikamig	-	down
aatisookaan	-	legend

SUGGESTED RESOURCES/MATERIALS:

1.	Projector	5.	Poster Board	9.	Bus
2.	Film	6.	Markers	10.	Paper
3.	Magazines	7.	Scissors	11.	Pencils
4.	Glue	8.	Elders	12.	Resource Books

13. Clifton, J., Cornell, G., & McCluken, J. (1986). People of the three fires. Grand Rapids, MI: Intertribal Council.

14. Densmore, F. (1970). Chippewa customs. Minneapolis: Ross & Haines.

15. Hungary Wolf, A. (1975). Indian summer. Ivermore, British Columbia, Canada: Good Medicine Books.

16. Nichols, J. & Nyholm, E. (1979). Ojibwewi-Ikidowian: An Ojibwe word resource book. St. Paul: Minnesota Archeological Society.

RELATED CONTENT AREAS:

1.	Biology	5.	Art
2.	Science	6.	Ojibwe Customs
3.	Social Studies	7.	Ojibwe History
4.	Language	8.	Ojibwe Oral Traditions

CROSS REFERENCE:

1. Ritzenthaler, R. (1983). Woodland Indians of the Western Great Lakes. Milwaukee, WI: Milwaukee Public Museum.
2. The Public Library
3. People of The Three Fires
4. Biology
5. Science

INDIAN SUMMER

The hot stillness of Summer is gone from the Land. Only dry Earth and brown leaves remain. Cool fresh Air has already arrived, to give us energy---to let us get ready for Winter, again. Indian Summer: Time to hike and enjoy getting sweaty ... Time for last plunges into the already-cooled stream ... Time to start cutting firewood and getting supplies ready ... Time for the Winter Dreams, and as Indian Summer is finished we get our snowshoes, again ... We load the stove with wood to keep it going ... We put the kids on the toboggan...And we set out to Experience Nature, through woods, across fields, and over frozen ponds...Past Experiences direct each step we take--the pure, white world of Snow, ahead shows us that no one has taken our steps before...Just like Life, itself, the exact Path is for us to use the best of knowledge and wisdom in an effort to lead our children in a way that will keep them safe and make them happy through legends and stories.

Adolf Hungary Wolf

LESSON PLAN #1

LESSON TITLE: SEASONAL CYCLES OF THE OJIBWE

GOALS:

Students will recognize the balance and order of Mother Earth and her elements.

OBJECTIVE:

1. Students will develop respect and understanding of how Ojibwe life revolves around the four seasons and will express their respect and demonstrate their understanding by writing a short essay explaining the significance and symbolization of the four seasons.

2. Students will be able to draw a diagram of the cycle chart and the elements.

PROCEDURE:

1. Distribute copies of the poem, Indian Summer, which gives an overview of the seasonal cycles. Read the poem to the class as a motivator for the lesson.

2. Present the cycle chart to the class beginning with the East and Spring season.

3. Obtain the filmstrip and cassette, Life Through the Seasons, from the Ojibwe kit published by the Minnesota Historical Society.

4. Read People of the Three Fires together with the class or have students do independent reading. Prepare a list of questions for class discussion afterward.

ACTIVITIES:

1. Read the poem Indian Summer to the class. Have students close their eyes to feel and sense the season.

2. Present the cycle chart and explain it beginning with the East and Spring season.

3. Read the Ojibwe section (make photocopies for students) from People of the Three Fires.

4. Discuss with students what they have learned about seasons. Ask questions that will draw specific factual answers. Then ask questions that will allow students to speculate.

5. Invite an elder to the class to discuss seasonal activities of the OJIBWE people.

6. Generate a class discussion that challenges students to use past experiences as well as what they just learned. Avoid questions that will draw yes/no answers. Begin with outgoing talkative students first and then draw other students into the discussion gradually.

RESOURCES:

1. People/Elders from the community
2. Public Library

MATERIALS:

1. You will need tobacco to offer to the elder that is invited to the classroom.
2. Photocopies of the poem, Indian Summer
3. Posterboard or tagboard to make the cycle chart.
4. Book: People of the Three Fires, Grand Rapids Inter-Tribal Council, Michigan.
5. Filmstrip: Life Through the Seasons and cassette from the Ojibwe kit.
6. Film projector.
7. Tape recorder.
8. Markers for making charts and diagrams.

EVALUATION:

1. After reading the Ojibwe section from People of the Three Fires and viewing the filmstrip, have the students write a short essay explaining the significance and symbolization of the four seasons or explain the four directions.
2. The student will diagram a chart to illustrate The Ojibwe Way of Life Among the Elements showing the various elements in the cycle and other symbols correctly.

BIBLIOGRAPHY:

1. Hungary Wolf, A. (1975). Indian Summer. Ivermore, British Columbia, Canada: Good Medicine Books.
2. Clifton, J., Cornell, G., & McCluken, J. (1986). People of the Three Fires. Grand Rapids MI: Intertribal Council.

CONTENT EMPHASIS:

Students will be provided with information on the seasonal cycles, changes that take place during each one, how people, animals and plants must adapt to each one. Particular emphasis will be given to Ojibwe cultural adaptations to the environmental changes.

COGNITIVE EMPHASIS:

Students will develop skills in information gathering, recalling information, synthesizing it, summarizing it and developing a generalization of it through an essay.

LANGUAGE EMPHASIS:

Vocabulary development:	by learning words and their meanings that deal with seasons.
Comprehension:	understanding the literal and cultural meanings of words and sentences.
Aural language development:	listening and recognizing sounds, being able to listen for messages.
Oral language development:	appropriate pronunciation of words and being able to "speak" Ojibwe.

LESSON PLAN #2

LESSON TITLE: HUMAN LIFE CYCLE

GOALS:

1. Students will understand the human life cycle and the various stages of development and will categorize the cycle into four stages while relating it to the Ojibwe cultural perspective.

2. Students will develop respect for elders and their heritage.

3. Students will understand the biological process of human development.

4. Students will become more proficient in Ojibwe language as it relates to human development.

OBJECTIVES:

1. Students will develop listening skills by hearing elders speak on the four stages of the human life cycle and will make the appropriate verbal response indicating their comprehension of questions asked of them.

2. The student will participate in a talking circle to compare and contrast the stages of life of the past and present day Ojibwe. The criteria used will be evaluated by the number and quality of responses given by each student.

3. The students will demonstrate proficiency of Ojibwe terms by matching words to pictures from pages 37-40 of the Ojibwe Student Resource Book. Ojibwe Language Specialist Project, 1987.

PROCEDURE:

1. The teacher should have students read Chapter 3 of the Woodland Indians of the Western Great Lakes by Ritzenthaler.

2. The teacher should arrange for elder(s) to speak to students. The speaker should be given advance information that human physical development is the emphasis of the lesson and should be advised to talk about nutrition, exercise and Ojibwe ideas about what is considered good health.

3. The teacher should arrange seating for students that will be conducive to interaction and participation

4. The teacher should prepare in advance one or two questions to be asked after the speakers have finished their formal speeches.

5. The teacher should prepare an oral language test using the Ojibwe Student Resource Book, pages 36-40.

ACTIVITIES:

1. Students should read the Chapter 3 handout from the Woodland Indians of the Western Great Lakes.

2. Students will participate in a talking circle to compare and contrast the stages of life of the present day, transitional, and ancestral Ojibwe. Emphasis should be on the biological and physical development in each stage. This is a science lesson on the human life cycle, therefore, provide information on nutrition, hygiene, health, physical and mental development. Place emphasis on how the human life cycle has remained constant in spite of environmental, social and political changes. Provide information about how some changes in cycles can be slow. For example, the human life cycle will generally remain the same because genetic change will occur slowly.

3. The students will take a vocabulary test matching the Ojibwe terms to the appropriate pictures of body parts from the Ojibwe Student Resource Book, pages 37-40.

4. The students will find pictures depicting various stages of human life cycle and match them with the proper vocabulary word. These will then be put on a class poster to be displayed in the room.

RESOURCES:

1. Elders from the community (need tobacco to offer them for coming in).

2. Ritzenthaler, R. (1983). Woodland Indians of the Western Great Lakes. Milwaukee, WI: Milwaukee Public Museum.

3. Tribal newspapers.

4. Ojibwe Language Specialist Project. (1987). Ojibwe Student Resource. Rainy River, MN: Arrowhead Community College.

MATERIALS:

1. Posterboard 2. Scissors 3. Glue

VOCABULARY LIST:

1. abinoojiiyens	-	baby	6. akiwenzii	-	old man
2. gwiiwizens	-	boy	7. mindimoye	-	old woman
3. ikwezens	-	girl	8. nookomis	-	grandmother

4. inini - man
5. ikwe - lady
9. nimishoomis - grandfather

CONTENT EMPHASIS:

Focus will be placed on human biological development and what Ojibwe's consider the four stages of life.

COGNITIVE EMPHASIS:

Thinking skills will concentrate on information gathering and recall of information. There will also be emphasis on comprehension or understanding of figurative descriptions of the Ojibwe world view. In addition there will be some development of critical thinking skills through presentation, discussion and examination of the Ojibwe world view as it relates to human biological development and its place in the Universal Cycle of Life.

LANGUAGE EMPHASIS:

Vocabulary development, listening, oral, and comprehension skills will be emphasized through presentations, discussions, questioning and answering. Students will be expected to use Ojibwe language as much as possible. The teacher should also speak the language to allow students to become familiar with the sounds of the language and to develop comprehension skills.

LESSON PLAN #3

LESSON TITLE: THE ROLE OF ANIMALS IN THE UNIVERSAL CYCLE OF LIFE

OBJECTIVES:

1. Through the study of the life cycle of animals, students will develop respect and appreciation for animals and will express them by explaining the importance of animals in the past and present lifestyle of the Ojibwe.

2. Students will understand the interrelationship of animals in the universal cycle. They will illustrate on a chart how the cycles of animals interact and are interdependent, thus demonstrating their understanding of the importance of animals in the Universal Cycle.

3. By writing an essay, students will express their generalization of why animals are important in the Cycle of Life. They will support their viewpoint with sound reasoning.

PROCEDURE:

1. The teacher will briefly review the Universal Cycle of Life previously presented.

2. By using charts, pictures or illustrations during lecture, the teacher will help students understand animal life cycles.

3. Students will identify ways in which animals have been used by Ojibwes in the past and how they are used today.

4. Students will, through discussion, make a generalization about the importance of animal life cycles to the continuation of other cycles (plant, elements, soil, etc.).

ACTIVITIES:

1. Review the concept of the Universal Cycle of Life. Include an explanation of the interrelationship of animals.

2. Students will develop a list of how animals have been important to Ojibwe people in the past. They will then develop a second list of how animals are important today and will compare the two lists making note of differences and similarities.

3. Students will study the food chain of certain animals, i.e., coyote, mountain lion, racoon, etc. and become aware of the interaction of animals. Students will also study how certain animals can influence each other's life cycles, i.e., salmon and bears, rabbits and coyotes, etc. After this study students will develop a life cycle chart of particular animals of their choice illustrating how they are interdependent and/or interactive.

4. Students will develop a generalization by writing an essay on how animals are an important part of the Cycle of Life.

RESOURCES:

1. Densmore, F. (1970). Chippewa Customs. Minneapolis: Ross & Haines.
2. Clifton, J., Cornell, G., & McCluken, J. (1986). People of the Three Fires. Grand Rapids, MI: Intertribal Council.
3. Biology books.
4. Encyclopedias.
5. National Geographic.

MATERIALS:

1. Charts of animal cycles.
2. Charts of animals interacting.
3. Books.
4. Pictures of animals.

EVALUATION:

1. Students will identify how animals were used by Ojibwe people in the past and compare and contrast it to how they are used today.
2. Students will illustrate a chart depicting the interaction and interdependence of animals to each other.
3. Students will write an essay generalizing on the importance of animals in the Cycle of Life supporting their conclusions with sound and logical reasoning.

CROSS REFERENCE:

1. Biology
2. Social Studies
3. Ecology

CONTENT EMPHASIS:

The role of animals in the Universal Cycle of Life will be emphasized. The interaction and interdependence of animals will be taught. Students will be given information on how animals play an important role in each other's life cycle and in the Universal Cycle of Life.

COGNITIVE EMPHASIS:

Higher order thinking skills will be the focus in this lesson. Relating animal life cycles to other forms of life requires use of factual and conceptual information. Both concrete and abstract ideas must be related to each other to understand the Universal Cycle of Life. Students will be given concrete factual information and, led through discussion, to relate information to make generalizations about the Universal Cycle of Life.

LANGUAGE EMPHASIS:

Language development will include: understanding of sentence structure and being able to make sentences, oral and aural language development, developing questions, and understand information given in both Ojibwe and English.

LESSON PLAN #4

LESSON TITLE: ANIMALS IN THE LIFE CYCLES OF THE OJIBWE

GOALS:

Through storytelling students will study the life cycle of beavers and will gain awareness of interaction and interdependence among animals, plants and water, thus coming to understand the role that animals play in the Cycle of Life.

OBJECTIVES:

1. Design a puppet show and script it in Ojibwe depicting a story about the behavior.
2. Students will demonstrate understanding of life cycles by accurately answering questions about events and symbols in the play.
3. Students will draw a diagram of the life cycle of beavers, plants, and the elements to demonstrate their knowledge and understanding of interdependence and interaction in nature.
4. Students will be able to relate how beavers, plants and animals are dependent on each other by writing an essay about the play.

PROCEDURE:

1. Through discussion the teacher will present information on the life cycles of various animals emphasizing the interaction between the cycles of plants and the elements.
2. With student participation, develop the play "The Three Beavers." Prepare puppets, stage, backdrop and dialogue (in Ojibwe).
3. The teacher will read the play aloud and then list playing parts. Assign specific tasks needed to carry out the show.
4. Practice in Ojibwe with students and then perform the play for the class, parents, young students.

ACTIVITIES:

1. Students will demonstrate understanding of lesson objective by producing and presenting a short play using puppets to explain survival techniques, interaction of animals and interdependence between animals, animals and plants, and animals and the elements. During development of the play examine the meaning of the story. Allow each student to interpret according to their own understanding. Accept all answers. Consider no answers wrong.

2. Read the play aloud. Then list playing parts, supporting parts. Assign parts and specific tasks needed to carry out the show.

Roles in the puppet show:

1 Mother Beaver	One fox
Beaver 1 (goes to grass)	Design puppets (6)
Beaver 2 (goes to leaves)	Design sets (6)
Beaver 3 (goes to build a dam)	Video and audio function

3. Practice roles, make puppets, make settings, director should prepare for any foreseen problems on stage, camera person and audio person should set up best "screen" settings.

4. Allow time for students to practice the dialogue of the play. They can first practice by themselves or together in pairs. When they have had sufficient time to memorize their lines, have them practice with the puppets.

5. Prepare questions (in Ojibwe and English) for post puppet show.

When does the beaver build its dam?
Where does he build it?
What colors are represented by the beaver?
What stage does this storytelling lesson represent?
What animal is the story about?
What gift is signified here?
Does direction have any significance here in this story?

6. Practice with puppets and dialogue.

7. Present to other students, parents and elementary students.

VOCABULARY LIST

amik - beaver gikendamoowin - wisdom aatisookaan - legend

RESOURCES:

1. "The Three Little Beaver's." A Notebook for Native Language Teachers, Indian & Northern Affairs, Canada. (1987).

2. Benally, A. & Longie, J. (Eds.), Curriculum Development for Science and Language. Madison, WI: Upper Great lakes Multifunctional Resource Center, Wisconsin Center for Education Research, University of Wisconsin-Madison.

3. Krisvoy, J. (1981). The Good Apple Puppet Book. Hamilton, IL: Good Apple Press.

4. Nichols, J. & Nyholm, E., (1979). Ojibwe Student Resource. Rainy River, MN: Arrowhead Community College.

5. Roundtree, B.S., Shruptine, M.S., Gordon, J.F., and Taylor, N.T. (1981). Creative Teaching With Puppets. University, AL: The Learning Line, Inc.

MATERIALS:

1. Tobacco to offer to the elder who will come to the classroom.
2. Photocopies of the play "Three Little Beavers."
3. Posterboard or tagboard to make the background scenes.
4. Ojibwe Language Dictionary by Nyholm.
5. "Three Little Beavers" script.
6. Audio-visual equipment; video tape equipment; audio equipment.
7. Puppet materials (little beavers): paper plates (medium); puff balls (assorted sizes); craft "face features" (eyes and noses).
8. Puppet (mother beaver): commercial puppet.
9. Puppet (wolf): commercial fox painted black to look like wolf.
10. Assorted tape, scissors, glue, and white cardboard for orange beaver teeth.

CONTENT EMPHASIS:

Interaction and interdependence between animals, plants and the elements as displayed by beavers will be studied. Students will express their understanding of interaction and interdependence of animals as they relate to the Universal Cycle of Life.

COGNITIVE EMPHASIS:

Factual information and abstract information gathering will be key to student thinking skills development. Thus both lower and higher order thinking skills will be developed. Students will not only be presented with factual information but will be guided through questioning to relate factual information to abstract information to make a generalization.

LANGUAGE EMPHASIS:

Oral, aural and comprehension skills will be focused on as well as pronunciation and listening skills. Speaking and comprehension skills in turn will be enhanced.

UNIT PLAN - GROUP II

UNIT: **RAIN (Evaporation)**

THEME: Water is one of the four basic elements of life. It is essential for the continuation and maintenance of life.

CONCEPTS:

1. Cycles: Nature has various elements and components that revolve in life systems allowing for renewal and rejuvenation.
2. Changes: Nature is not constant. It undergoes various cycles. Some changes are slow and subtle; others are rapid and drastic.
3. Renewal: By completion of various cycles, different aspects of nature are reborn. As the old dies or passes on new life begins their cycle. (crops, leaves, animals, etc.).
4. Interaction: Elements and various aspects of nature cooperate and interact influencing each other's cycles.
5. Growth: Through change, life forms progress in size and maturity.
6. Ojibwe world view: The Ojibwe have a unique outlook on what they think the world looks like and how it works.

GOALS:

1. Students will develop an appreciation for the spiritual aspects of the purpose of water, its uses and contribution to life in general.
2. Students will gain an understanding and appreciation of rain formation and its effect on life.
3. Students will learn appropriate Ojibwe terms relevant to the unit on the water cycle.

OBJECTIVES:

1. Students will study the cycle of rain formation and give a written report documenting knowledge learned.
2. Students will interview resource people about the Ojibwe viewpoint of water's significance and will write a report.
3. Students will learn the effects of water on the environment and life through demonstrations and will demonstrate their understanding and knowledge through participation in class discussions.

PROCEDURES:

The activities in this unit are to be coordinated with the Indian staff within your school to ensure not only factual information, but to make this curriculum unit relevant to your particular community. The activities can easily be modified and adapted to represent your own individual community's culture within the realm of science and how it was and still is being used by the community. The language vocabulary list in this unit does not necessarily represent your local dialect, and in some cases the names of the months. Therefore, it is imperative that you use your Indian Education staff as a partner before entering into this project.

1. Demonstrate the process of making sugar cakes for students. Explain evaporation as the sap is boiling. Include cultural information that would explain utensils people used before pots and pans were acquired, what containers were used to collect the sap, how the sap was collected, etc.

2. Point out changes that occur the longer the sap boils, the consistency, color changes, volume changes and whether the sap is useful for anything or not (at whatever point you are at in the process).

3. Where it is safe allow students to actively take part in the processing of the sap. Allow them to touch, taste or smell the sap if possible. Make available samples of syrup, cake and other products.

4. During demonstrations, lectures and discussions use Ojibwe langauge as much as possible so students can become acquainted with the sounds of the language and can begin comprehending it. Require use of the language by designating a time when only Ojibwe is used in speech and instruction. Students will then have the opportunity to use the language and experiment with it.

ACTIVITIES:

1. Perform experiments in the classroom showing evaporation in a culturally relevant manner, (Maple sap boil down). As students watch the demonstration, explain how the same process was done in the past using different materials to process sap. As much as possible provide cultural insights.

2. Demonstrate the process of condensation. Explain what condensation is and point out how it works in a pot. Compare it with rain in the environment. Allow students to use their knowledge and understanding to reason how rain comes about in nature. Provide them with factual information that will help them understand and express their ideas on rain and condensation.

3. Undertake individual projects dealing with rain's effect on the environment (either too little or too much). Through pictures discuss with students the positive and negative effects of rain. Identify with students how rain is useful to them and how it acts positively in nature to help it maintain and continue its existence. Discuss also how rain can be negative to people as well as to the environment. Consider what can be done to temper the negative effects of rain. Can students do anything to help? Talk also about how the positive effects of rain can be enhanced without endangering balance in nature. Have students prepare a detailed explanation of the benefits of rain.

5. Have students prepare pictures, using natural materials when possible, showing the different types of rain in association with cloud formations.

6. Students will show graphs depicting rain amounts in a 30-day period, using natural materials when feasible. This will be an ongoing process. However, at the end of the 30-day period, discuss the results and relate them to other learning activities that have been done concerning rain. For instance, if there was little rain, what effect might it have on crops, maple trees, river and lake levels, etc.

MATERIALS & RESOURCES:

1. Jars, pots, burner, spoon, measuring cups, etc.

2. Pictures from resource books, National Geographic, July 1987 issues.

3. Natural products: (sap, water and their by-products).

4. Farmers' Almanac as a resource book (informational).

5. Scissors, paste, markers, construction paper, cotton.

6. Natural materials: (wood, birchbark, branches, etc.).

VOCABULARY LIST:

(This is where a resource person is important.)

_____ Dialect _____ Band or Tribe
(Insert which dialect and band or tribe is being used.)

Gimiwan	It's raining	Aandego-giizis	March
Gishaate	It's hot	Waabigwani-giizis	April
Animikiikaa	It's thundering	Zaagibagan-giizis	May
Ningwaanakwad	It's cloudy	Ode'imini-giizis	June
Niimin	Dance	Abitaniibini-giizis	July
Mooshwaaganan	Scissors	Miinike-giizis	August
Noodin	It's windy	Manomini-giizis	September
Awan	It's foggy	Binaakwii-giizis	October
Awanibiisaa	Heavy fog or mist	Ziigwan	Spring
Gichi noodin	Big wind	Niibin	Summer
Mazine'igan	Paper-book	Dagwaagin	Fall

LANGUAGE LESSONS:

1. Ojibwe vocabulary memorization
2. Meanings
3. Listening and comprehension
4. Students to present them in Ojibwe

RELATED CONTENT AREAS:

1. Language Arts
2. Earth Science
3. Oral Traditions and Customs

MATERIALS:

1. Resource people must be fully prepared before entering the classroom
2. Glass jars with water
3. Graphs and charts
4. Maple sap
5. Maple sap boiled down
6. Maple syrup
7. Sugar cube

CROSS REFERENCES:

1. Social Studies
2. History
3. Home Economics
4. Biology
5. Botany

LESSON PLAN #1

LESSON TITLE: OJIBWE VIEW OF THE IMPORTANCE OF WATER

OBJECTIVE:

Students will learn the importance of water and will demonstrate this knowledge by verbal response to questions asked by elders.

PROCEDURE:

1. The teacher will give tobacco to elders for coming in.
2. The teacher will prepare an informal, comfortable setting which would facilitate learning activities for students and elders.
3. The teacher will prepare vocabulary cards related to each activity.

ACTIVITIES:

1. Elders will speak with students about the relationship of rain in the cycle of life through an informal group setting. Emphasize the spiritual importance of water, its relation to the Ojibwe's world view of harmony in nature, respect and appreciation of nature, and to their ideas that all things have a place and purpose.
2. Elders will tell stories pertinent to rain, (mosquitoes biting, frogs croaking, etc.) to demonstrate that Ojibwe people understood many pieces of factual information about water and rain.
3. Ojibwe terms pertinent to rain, which have been written on cards, will be provided for students to learn from.
4. Students should be encouraged to ask questions of the resource person. On the previous day have a discussion on rain and water. With the students list all the information you know of concerning rain in Ojibwe culture. This can include such things as leaves turning before it rains, etc.

RESOURCES:

1. Elders in community.
2. Materials: tobacco, word cards.
3. Information: knowledge and love of elders.
4. Language: Ojibwe terminology related to rain.

EVALUATION:

1. Discussion with students of topics taught and learned in activity will determine students' knowledge.

2. Recitation and studying of vocabulary cards to show language acquisition, particularly in pronunciation and aural recognition of Ojibwe words.

3. Students will relate their learning and acquisition of new information to different aspects of everyday living.

CONTENT EMPHASIS:

Rain and how Ojibwe people view it from a science perspective will be taught in this lesson. The importance of water and its place in the Universal Cycle of Life will be taught.

COGNITIVE EMPHASIS:

Information gathering and recall of that information will be emphasized. Comprehension of abstract ideas and concepts relating to water as a necessary part of the Universal Cycle of Life will be taught.

LANGUAGE EMPHASIS:

Listening skills will be developed in this lesson. This includes listening for specific information, listening to interpret information, and listening to understand what is being said. A second skill will be verbalization through questioning and answering questions in discussions.

LESSON PLAN #2

LESSON TITLE: THE PROCESS OF CONDENSATION

OBJECTIVE:

Through observation of a demonstration of the process in which water vapor changes to liquid as in the rain process, students will gain knowledge of the evaporation process and will demonstrate their knowledge by explaining the evaporation process when asked.

PROCEDURE:

1. The teacher will boil water making vapor through a vaporizing unit.
2. The teacher will make and hand out a diagram of the condensation process.
3. The teacher will explain how the experiment relates to the formation of rain.
4. Ojibwe language will be utilized and taught. Vocabulary words and phrases that relate to water, evaporation and rain will be used often to help students acquire the language.

ACTIVITIES:

1. Students will learn the process of condensation by reading the handout and observing the experiment. They will make special note of Ojibwe language used. They will be required to use as much of the language as possible.
2. Students will learn Ojibwe terms relating to the lesson working with flash cards and repeating words.
3. Students will be provided with a handout of the evaporation process so they can fill in the blanks in Ojibwe and English to demonstrate their understanding of the evaporation process.

RESOURCES:

Vaporizer, water, plastic and handouts.

EVALUATION:

1. Students will be given a test of a fill-in-the blanks handout on the Ojibwe and English terminology of the condensation process.
2. Student evaluation will be based on participation in class discussion and use of Ojibwe language when prompted by questions.

CONTENT EMPHASIS:

Evaporation and condensation in the rain cycle will be taught. Students will learn how evaporation works in the water cycle to create rain.

COGNITIVE EMPHASIS:

Acquisition of factual information will be the focus.

LANGUAGE EMPHASIS:

Vocabulary development and awareness and comprehension of phrases will be emphasized. Listening skills will also be developed. These include literal listening and listening for comprehension/understanding.

LESSON PLAN #3

LESSON TITLE: EVAPORATION

OBJECTIVE:

Students will learn the basic concept of evaporation and demonstrate their knowledge by submitting individual written essays.

PROCEDURE:

The instructor will teach from the concrete to the abstract to enhance student learning potential. The lesson will conclude with cultural demonstrations on the Ojibwe people's knowledge and use of evaporation.

ACTIVITIES:

1. Inform students that they use the process of evaporation in many ordinary ways. (Give students examples of evaporation in terms they can relate to - doing laundry and hanging clothes on the clothesline). Hold up clothes line and ask if they hang clothes out in the summer; use cards showing sun and clouds. Instruct students that they already know one process of evaporation (could use a bowl with water in it and let it stand overnight; the water evaporates, and you end up with an empty dish).

2. Handouts: Use articles from encyclopedias to furnish students with the scientific definition of evaporation.

3. Explain to students how Ojibwe people used all forms of science which includes the process of evaporation. To put evaporation into meaningful terms look at different ways Ojibwe people used the evaporation process in their food gathering and preservation: drying berries; tanning hides; drying meat; making sugar, candy, syrup and sugar cakes.

4. Demonstrate the process of evaporation in just one of the above areas. (i.e., Maple sugar project):

    a. Utilize containers to reflect the quantity of liquid one starts with (2 gallons of sap) to end up with 1/4 cup syrup.

    b. Use the actual product to show not only evaporation of liquids but also the density change of the liquid.

    c. Bring into focus how Ojibwe people and the Maple tree interact. The tree takes rain through its roots which nurture the tree. Cold nights and warm days make the sap run up the tree to give life to the new leaves, which in turn give off moisture through the evaporation process. The Ojibwe enters at this point (when the sap is going up the tree) and taps it to take some of the tree's life. He then initiates an evaporation process by boiling the sap. When both the tree and the Ojibwe are finished, neither has damaged the other, but rather, acting as partners supplied a much needed commodity in the Ojibwe's life.

RESOURCES:

1. Elders from the community.
2. Construction paper, scissors, markers.
3. Cultural materials: maple sap (if its in season) or water maple syrup, maple sugar cakes, maple sugar, maple cone (made out of birch bark).

EVALUATION:

Students will write individual essays about evaporation and how the Ojibwe, prior to contact with Europeans, utilized this process. They should go beyond this lesson and look into other unique areas of earth science that the Ojibwe used. Essays submitted in addition to those relating to this lesson will be counted as extra-credit.

VOCABULARY LIST:

Anishnabe ziiziibakwad	-	Maple Sugar	Manoomin	-	Rice
Ziiziibkwadoos	-	Candy	Asekaan	-	Tanned
Ziigayegaas	-	Sugar Cake	Giduseegay	-	Parching
Ziiziibakwedaaboo	-	Sap (sugar water)	Inahtig	-	Maple Tree
Skiiwagamiziigan	-	Syrup (real sweet sauce)	Wiias	-	Meat
Skiigamiziigaygiisis	-	Sugar Making Month, April (Fdl dialect)	Miinan	-	Blueberries

CONTENT EMPHASIS:

Students will learn of activities that use evaporation. They will also learn how Ojibwe people used evaporation in daily activities.

COGNITIVE EMPHASIS:

Students will acquire information as well as recall information from previous experiences and will relate it to current learning.

LANGUAGE EMPHASIS:

Listening, speaking, comprehension and writing skills will be developed. Students will listen for specific information to decipher meaning, literal and abstract. They will also verbalize their thoughts so they can write about their learning.

LESSON PLAN #4

LESSON TITLE: **VOCABULARY BUILDING IN RELATION TO MONTHS, EVAPORATION AND CONDENSATION OF RAIN.**

OBJECTIVE:

Students will learn basic Ojibwe words relating to rain formation, evaporation, and condensation. They will demonstrate their skills by using the phrases and making appropriate responses when questions are asked of them in Ojibwe.

PROCEDURE:

The techniques and teaching methods to be used will be presented in lecture format. Proper pronunciation will be emphasized. Story telling and visual aids will be used to explain terms and phrases.

ACTIVITIES:

1. Students will practice basic Ojibwe words listed in this unit.
2. Students will build simple sentences with words learned in class.
3. Students will also learn the alphabet of the Ojibwe language.
4. Students will practice oral skills.

RESOURCES:

1. Resource people who are fluent in Ojibwe.
2. Reference books: Ojibwe Language dictionary, encyclopedias, etc.
3. Handouts: news clippings, articles, etc.

EVALUATION:

Students will be evaluated on their ability to explain the rain cycle in Ojibwe as well as participation, ability and effort in appropriate use of terms and phrases.

CONTENT EMPHASIS:

The lesson's purpose is to help students identify how rain and evaporation take place. Information will include side benefits and the negative effects that rain brings to the environment and to life.

COGNITIVE EMPHASIS:

Students will develop skills in comprehension and information gathering.

LANGUAGE EMPHASIS:

Listening for factual and abstract information and for meaning and understanding, vocabulary expansion (English and Ojibwe), writing skills in Ojibwe, and development of sentences from words learned.

LESSON PLAN #5

LESSON TITLE: EVAPORATION

OBJECTIVE:

Students will learn Ojibwe words and phrases relating to rain formation, evaporation and condensation. They will demonstrate language proficiency by proper enunciation and development of simple sentences.

PROCEDURE:

1. The teaching strategy employed will be lecture format, with the teacher using such visual aids as charts to explain the evaporation process.

2. Storytelling will be used to explain and demonstrate Ojibwe attitudes about water.

3. Careful instruction and drilling will be provided for students in their learning of vocabulary and sentence structure.

ACTIVITIES:

1. The teacher will explain the evaporation process in Ojibwe to begin students' oral skills in recognizing and becoming familiar with the sounds of the Ojibwe language.

2. The teacher will provide instructions on Ojibwe terms and phrases as they relate to evaporation and condensation. Students will be drilled slowly and patiently in proper pronunciation of words and phrases.

3. Students will be provided with information on the basic sentence structure of the Ojibwe language as well as the alphabet and sounds of the language.

4. Students will be given an opportunity to practice developing sentences as well as oral skills in the language.

RESOURCES:

1. Elders who are fluent in Ojibwe.

2. References: books, encyclopedias, Farmer's Almanac, etc.

3. Handouts, newspaper clippings, articles, etc.

4. Periodicals.

5. Stories from other Ojibwe people.

EVALUATION:

1. Evaluation of student participation in discussions and language drills.
2. Evaluation of student ability to form simple sentences with words given/suggested.
3. Evaluation of student proficiency in pronunciation of words and phrases.
4. Evaluation of comprehension of language when spoken to in Ojibwe.

CONTENT EMPHASIS:

The main purpose of the lesson is to help students identify seasons when the most rain and evaporation take place, how rain provides positive side benefits and how it negatively affects the environment.

COGNITIVE EMPHASIS:

Information gathering will be skills developed in this lesson.

LANGUAGE EMPHASIS:

Verbalization, vocabulary development, writing skills, sentence development and comprehension for meaning are skills that will be emphasized. Students will speak Ojibwe, developing sentences with the vocabulary given. They will also write out sentences using the acquired vocabulary.

UNIT PLAN - GROUP III

UNIT: THE GROWTH CYCLE AND HARVESTING OF WILD RICE

THEME:

Wild rice was a major food source for the survival of the Anishinabe. They needed to understand and respect the growth cycles, harvesting, finishing and preparation to insure their family's survival.

CONCEPTS:

1. Universal Cycle of Life: Everything revolves in a cycle, allowing renewal and rejuvenation of all life as well as continuity.

2. Cycles: Nature has various elements and components of life that revolve in a life system.

3. Renewal: By completion of various cycles, different aspects of nature are reborn. As the old dies or passes on new life begins its cycle. (crops, leaves, etc.).

4. Growth: Through change, life forms progress in size and maturity.

5. Interaction: Elements and various aspects of nature cooperate and influence each other's cycles.

6. Change: Nature is not constant. It undergoes various cycles. Some changes are slow and subtle; others are rapid and drastic.

7. Responsibility: People are obligated to respect the many gifts provided by nature. They are also obligated to take care of them and use them without wasting or abusing them.

8. Balance: Nature is organized so that all its components act to maintain each other's existence. One part is not greater or more important than another. Each component has its place and purpose.

GOALS:

1. Students will appreciate the spiritual aspects of the growth cycle, harvesting and finishing of wild rice.

2. Students will learn basic vocabulary words associated with wild ricing.

3. Students will gain factual knowledge of the wild rice growth cycle.

4. Students will become familiar with traditional and modern methods of processing wild rice.

5. Students will be aware of how to prepare wild rice for consumption.

OBJECTIVES:

1. Students will learn about the spiritual aspects of the growing cycle, harvesting and finishing of wild rice and will demonstrate their understanding through participation in group discussions.

2. After becoming familiar with the growth cycle of wild rice, students will learn the basic vocabulary terms associated with ricing.

3. Students will gain factual knowledge of the total growth cycle of wild rice through class lecture, reading and completion of the handouts.

4. Students will learn the steps of harvesting wild rice through class lecture, reading assignments and participating in group discussions.

5. Students will demonstrate their knowledge of how to dry, parch, separate the rice kernals from the hulls, and fan the rice to separate it from the chaff through lecture, observation and performing the tasks during a field trip.

6. The students will learn to prepare wild rice by following traditional methods with 100% accuracy.

ACTIVITIES:

1. With students view the film, The Harvesting of Wild Rice. Discuss its content through class discussion. Consider the spiritual aspects of ricing and examine its importance to Ojibwe life.

2. Give students an Ojibwe vocabulary list to study. They will then make flash cards for use in studying the terms.

3. Using charts and examples of rice plants in various stages of growth explain the life cycle of wild rice. Explain the dormant stage, the germination and maturation of the plants and all the environmental conditions that must exist to assure a healthy and abundant crop. Discuss external conditions that influence the health and well being of the plants.

4. The teacher will bring in some tools and materials used in the rice picking process. The students will learn by seeing and handling actual materials.

5. View a slide presentation of the traditional and modern methods of processing wild rice after it has been picked.

6. Take the students on a field trip to the lake to give them an opportunity to practice picking and finishing rice.

7. The teacher will give a demonstration on cooking wild rice by boiling it in water and popping it in oil. The students will break into group and try both methods using the rice they have processed.

RESOURCES:

1. Film: The Harvesting of Wild Rice by Bert Yerxa.
2. Vocabulary word list, flash cards, scissors, and markers.
3. Slide presentation about wild rice harvesting, projector.
4. Elder as spiritual leader.
5. Rice pole, knocking sticks, fanning basket, wash tub or big cast iron kettle, paddles, rice sack, firewood, canoe, lifejackets, tarp, gloves, moccasins, transportation, tobacco.
6. Hot plate, cooking oil, utensils, salt, pots, and deep-frying pan.

RELATED CONTENT AREAS:

1. Botany
2. History
3. Science
4. Conservation
5. Safety
6. Oral Traditions
7. Language Arts
8. Home Economics

MATERIALS:

Rice knockers, rice pole, birchbark baskets, vocabulary terms, and illustrations depicting the growth cycle.

CROSS REFERENCES:

1. Ecology
2. Earth Science
3. Ojibwe Oral Traditions
4. Culture Lessons
5. Ojibwe History

LESSON PLAN #1

LESSON TITLE: SPIRITUAL ASPECTS AND GROWTH CYCLE OF WILD RICE

OBJECTIVE:

The student will learn and come to appreciate the spiritual aspects of the growing cycle, harvesting and finishing of wild rice through lecture by a tribal leader. The students will demonstrate their learning through participation in group discussion.

PROCEDURE:

1. The teacher will introduce the elder.
2. The elder will lecture about the spiritual aspects of ricing for approximately 20 minutes.
3. A question and answer period will follow the lecture.
4. Students will be introduced to the Ojibwe terms with a vocabulary list. The elder will pronounce the words, and the students will repeat them out loud.
5. The student will receive a homework assignment to complete an Ojibwe vocabulary worksheet.
6. The teacher will lecture about the growth cycle of wild rice.
7. The teacher will assign a growth cycle worksheet for the students to complete at home.

ACTIVITIES:

1. Prior to lecture by the elder, students will be given a vocabulary list. The teacher will pronounce each word.
2. A tribal elder will talk about the Great Spirit growing the plantation of wild rice for all to use. He will talk about respect and spirituality while picking the rice. The elder will also talk about when it is time to pick the wild rice.
3. After the lecture the students will have a chance to ask questions.
4. Using the vocabulary list given to the students prior to the lecture, the students will recite the words. The elder will pronounce each word, and then the students will repeat them four times.
5. Hand out an assignment of two crossword puzzles, for the students to complete at home.

RESOURCES:

1. An elder from the community.
2. Copies of an Ojibwe vocabulary word list with terms associated with the wild rice growth cycle.
3. Copies of an Ojibwe word crossword puzzle.

EVALUATION:

1. Grading of homework assignments.
2. Participation in class discussion and as accurate pronunciation of terms as possible.
3. Attentiveness and involvement in lectures and presentations.
4. Attendance.

VOCABULARY LIST:

Asema	-	Tobacco	Manoomin	-	Rice
Zaaga'igan	-	Lake	Manoominiken	-	Ricing
Oziibi	-	River			

CONTENT EMPHASIS:

While learning the biological cycle of wild rice, students will also learn about the spiritual aspects of it. Of particular concern will be the importance of the rice to Ojibwe people.

COGNITIVE EMPHASIS:

Comprehension of Ojibwe and English language for meaning and for information. Gathering of factual information, synthesis of information to summarize and eventually draw conclusions.

LANGUAGE EMPHASIS:

Comprehension for understanding of language for meaning, listening skills for information, both factual and abstract, oral language skills for pronunciation, verbalization of ideas, questioning and answering questions.

LESSON PLAN #2

LESSON TITLE: WILD RICE GROWTH CYCLE

OBJECTIVE:

Students will learn Ojibwe words associated with the wild rice cycle and will demonstrate their learning by completing a teacher-prepared handout of vocabulary terms with 90% proficiency.

PROCEDURE:

1. At least four weeks prior to these activities, wild rice should be planted at staggered intervals to demonstrate the various stages of growth.

2. As many hands-on activities should be included (i.e., touching the plants, measuring them, handling the rice at various stages of development, writing on the board or the posters, etc.).

3. The lecture should be lively and colorful with as much activity and personal involvement as possible from the students.

ACTIVITIES:

1. Using charts and wild rice plants (at various stages of growth), explain the life cycle of wild rice. Make references to the previous lesson's learning activities with the lecture by the elder. Vocabulary words taught and learned will be utilized. New words will also be introduced and taught.

2. Allow students to handle the plants. Have them measure the plants, touch them and compare the sizes, color, etc. As a class keep a record of the growth rate of each plant. Experiment with them by giving each plant varying amounts of water and sunlight. Make a record of observations that can be made.

EVALUATION:

1. Observation of student participation in class discussion.

2. Determination of oral proficiency in pronunciation of Ojibwe words and phrases.

3. Oral and written language test.

CONTENT EMPHASIS:

Students will learn about the biological life cycle of wild rice. They will study about the kinds of climate, soil, water and season that allows for development. Students will learn vocabulary about the life cycle of wild rice.

COGNITIVE EMPHASIS:

Comprehension for meaning, recall of vocabulary learned in previous lessons, computation skills in measuring, comparing and observation skills.

LANGUAGE EMPHASIS:

Vocabulary, discussion, comprehension and listening skills will be developed.

LESSON PLAN #3

LESSON TITLE: HARVESTING WILD RICE

OBJECTIVES:

1. Students will learn the steps of harvesting wild rice through class lecture and will demonstrate their knowledge through participation in group discussions.

2. Students will be introduced to basic Ojibwe vocabulary terms associated with picking wild rice by studying an Ojibwe vocabulary list. Students will demonstrate their learning by completing a teacher-prepared handout of vocabulary terms with 90% proficiency.

PROCEDURES:

1. The teacher will show the film, The Harvesting of Wild Rice by Bert Yerxa.

2. Following the film will be a group discussion in a circle with each student explaining what he/she has learned while viewing the film. During the discussion, students will be introduced to the Ojibwe terms associated with harvesting wild rice. The teacher will pronounce each word, and the students will repeat them four times.

3. The teacher will show items or a picture of the items pertaining to the vocabulary words. The students will be required to identify each item using an Ojibwe phrase and write it on paper.

4. This lesson will build on previous lessons focused on the spiritual and affective aspects of harvesting and use of wild rice, and the life cycle of wild rice. The vocabulary and knowledge acquired will be reinforced in this lesson.

ACTIVITIES:

1. The teacher will greet the class in Ojibwe and introduce the film.

2. After the film the class will discuss what they learned during the film. Students should develop skills in verbalizing, calling information, relating appropriate information to each other, evaluating information, sequencing and making sound conclusions.

3. The teacher will give each student an Ojibwe vocabulary word list. The teacher will pronounce each word, and the students will repeat them out loud four times. Students should be required to use vocabulary and phrases learned in previous lessons. And, as much as possible, students should speak Ojibwe.

4. The teacher will show each of the items (or picture of the item) along with a flash card with the English word displayed. The student will be required to identify the item and write its Ojibwe name on their paper and hand it in. This activity can be repeated with the addition of words acquired in other lessons.

RESOURCES:

1. Film: "The Harvesting of Wild Rice" by Bert Yerxa
2. Film projector.
3. Vocabulary word list.
4. Flash cards.
5. Knocking sticks.
6. Picture of a canoe.
7. Paddles.
8. Push pole.
9. Gloves.
10. Sack.
11. Picture of thrashing rice.
12. Rice.

VOCABULARY LIST:

Asemaa	-	Tobacco	Manoonin	-	Rice
Bawi igamaakoon	-	Knocking sticks	Abwi	-	Paddles
Bimishkaa jiinaan	-	Paddling canoe	Miyikaawanag	-	Gloves
Gaandakii ganaak	-	Push pole	Mashkimod	-	Sack
Mimigoshkin	-	Thrashing rice			

CONTENT EMPHASIS:

The process of picking wild rice will be taught. Environmental conditions that affect the harvesting will also be presented.

COGNITIVE EMPHASIS:

Observation and recall of information is important in this lesson. Students will learn to gather information through participation and through listening. They will also use information from previous lessons to draw conclusions and complete a quiz.

LANGUAGE EMPHASIS:

Listening skills that include listening for factual information, listening for comprehension and listening to distinguish sounds will be learned. Verbalization of ideas and questions will also be developed.

LESSON PLAN #4

LESSON TITLE: CLEANING AND FINISHING WILD RICE

OBJECTIVE:

Students will learn the procedure of cleaning and finishing wild rice and will demonstrate knowledge by correctly performing each step in the process.

PROCEDURE:

1. Students will visit a local reservation where the cleaning and finishing process of rice is being done.

2. Teacher will introduce the cleaning and finishing steps of wild rice along with the basic Ojibwe vocabulary terms associated with the process.

3. Students will observe and help in the process of parching the rice, separating the husk from the kernels, fanning the rice, and bagging the cleaned rice.

4. Multiple-choice homework assignment will be handed out.

ACTIVITIES:

1. After the students arrive, the teacher will introduce the rice cleaning and finishing steps. The teacher will explain the drying and parching, jigging, and fanning processes of wild rice.

2. The instructor will demonstrate and teach the special techniques used in drying and parching rice.

3. The instructor will now explain how wild rice is husked and will demonstrate the movements used while jigging in the rice. The students will then perform the process.

4. The teacher will next explain and demonstrate the rice fanning process for the students to try. When the process is completed, students will help fill the rice sacks and gather the equipment up to store for future use.

5. A homework assignment of matching Ojibwe to English vocabulary terms will be given to the students. At least an 80% accuracy rate should be expected of students.

6. Gathering of knowledge should be encouraged as well as using language skills from previous lessons. By requiring students to use oral language skills at every opportunity previous language acquisition of language will be reinforced.

RESOURCES:

1. Transportation
2. Dry Firewood
3. Birchbark Fanning Basket
4. Wash Tub
5. Moccasins
6. Stirring Paddle
7. Rice Sacks
8. Gloves
9. Vocabulary Worksheet

EVALUATION:

1. The degree of student participation will be judged on behavior, cooperation and active involvement during the field trip.
2. Students will be expected to display proper social behavior and speech.
3. Completion of the vocabulary worksheet assignment with 90% proficiency will be expected.

VOCABULARY LIST:

Mimigoshkan	-	He jigs rice	Misan	-	Firewood
Bawishkaasijige	-	Fanning rice dust	Masaan	-	Rice dust
Obaasaan Manoomin	-	Drying rice	Makizin	-	Moccasins
Wiigwaasinaagan	-	Birchbark dish	Gidasige	-	He parches rice
Giziibiiga'ige-makak-		Wash tub	Minjikaawanag	-	Gloves

CONTENT EMPHASIS:

The cleaning and finishing of wild rice will be studied. The steps taken, tools used and the reasons for it will be presented to the students, who will take part in the actual processing.

COGNITIVE EMPHASIS:

Observation, comprehension, following instruction and recall of information will be developed.

LANGUAGE EMPHASIS:

Listening skills including listening for factual information as well as comprehension will be developed.

LESSON PLAN #5

LESSON TITLE: MODERN TRADITIONAL METHODS OF COOKING WILD RICE

OBJECTIVES:

1. Students will learn to prepare wild rice for consumption by up-to-date cooking methods using two popular, traditional recipes. They will demonstrate their understanding by following given instructions carefully.

2. Students will learn basic vocabulary terms associated with cooking wild rice, and when tested will complete it with 80% accuracy.

PROCEDURE:

1. The teacher will introduce the lesson and hand out word list.

2. The teacher will cook rice using two methods (boiling and popping). Students will listen to procedures while watching the teacher carry them out.

3. Students will have the opportunity to taste the wild rice prepared by each method.

4. Students will repeat vocabulary terms again after the teacher has pronounced them.

ACTIVITIES:

1. There is a vast variety of wild rice recipes available. The two recipes that will be used are popular ways that Ojibwe people like to eat wild rice (boiled rice and popped rice).

2. Introduce the vocabulary terms used in cooking rice, using flash cards. Point to the utensils and materials that they refer to. Ask students to repeat the words.

3. Start water boiling and bacon frying to make grease. Add a dash of salt to the water and 1 1/2 cups of rice. Cook until fluffed up and curled over. Drain off the remaining water. Add bacon grease; salt and pepper to flavor.

4. After bacon grease has accumulated, add 1 1/2 cups cooking oil to frying pan and heat until it begins to smoke. Turn the heat down slightly. Drop one kernal into the grease to see if it pops. If it does, add a pinch of rice into a fine screen sieve and lower it into the hot grease. The rice will pop up fast and should be taken out of the grease as soon as it pops. Pour popped rice into a bowl. Repeat over and over until the desired amount of rice is popped. Be sure to pop only a little bit at a time. Pass to students to taste.

5. End the lesson by pronouncing the vocabulary words with students repeating them.

RESOURCES:

1. Teacher and assistant.
2. 1-2 cups of rice.
3. Salt, pepper, cooking oil, few pieces of bacon.
4. Spoon, bowl, plate, frying pan, boiling pot, sieve.
5. Stove with at least two burners.
6. Two cooking recipes.

EVALUATION:

1. Attentiveness - interest in the demonstration, listening.
2. Participation - following instructions.
3. Verbal skills - pronunciation of words.
4. Comprehension of Ojibwe language - understanding Ojibwe spoken.

VOCABULARY LIST:

Ogiizizaan manoomin	-	Cooking the rice	Aamikwe	-	Spoon
Waakiski bimide	-	Lard, cooking oil	Abwewin	-	Frying pan
Giikanaamozigan	-	Bacon	Akik	-	Cooking pan
Gaawiisagang	-	Pepper	Zhiiwitaagan	-	Salt
Desinaagah	-	Plate	Onaagan	-	Bowl
Skoobiiginigan	-	Sieve			

CONTENT EMPHASIS:

Students will observe and take part in cooking wild rice. They will practice vocabulary words presented during the lesson and in previous lessons.

COGNITIVE EMPHASIS:

Observation, comprehension and recall of information will be developed.

LANGUAGE EMPHASIS:

Listening and speaking skills will be developed. Students will listen for comprehension of information presented as well as for specific factual information. Students will verbalize questions and their thoughts.

UNIT PLAN - GROUP IV

UNIT: TREES OF THE ANISHINABAE

THEME:

Because of their many varied characteristics, trees have been a major resource in meeting the physical and spiritual needs of the Anishinabe. In learning how to use trees, people have had to understand about their structure, life cycle and various characteristics.

CONCEPTS:

1. Respect: Appreciation of the many uses of trees by Ojibwe people.
2. Change: All aspects of nature undergo changes. Sometimes the changes are obvious and quick. Other times they are subtle and slow.
3. Traditions: As people have come to understand how seasonal cycles affect trees, they have developed certain social and cultural customs. Those of the Ojibwe are unique to their culture.
4. Science and the Ojibwe People: Ojibwe people were aware of the physiological interactions within their environment. They have always used this knowledge to interact positively with their environment to meet their needs.

GOALS:

1. Students will be able to identify Ojibwe Reservations within the state of Minnesota.
2. Students will identify traditional uses of trees and will come to appreciate their importance to Ojibwe people, both in the past and in the present.
3. Students will be aware of the physical structure and function of trees. They will be able to identify various parts.
4. Students will learn Ojibwe words (vocabulary) and phrases as they pertain to science and the use of trees.
5. By studying about trees, students will learn some techniques in survival.

OBJECTIVES:

1. Given a blank map of Minnesota, students will accurately locate and label Ojibwe reservations and will list trees that can be found on each reservation.
2. Shown slides of trees, students will identify 20 names of trees in Ojibwe with 90% accuracy.

3. Students will be able to identify in English, and where possible in Ojibwe, the basic parts of a tree including the layers from the center to the outside (branches, leaves, fruits, etc.)

4. Students will become aware of ten traditional uses of trees and will relate at least four of those to survival techniques.

5. Students will be able to describe four techniques of conservation through a written report.

6. Students will be aware of the reasons for offering tobacco before picking/making kinikinik and other leaves, bark or roots. If they wish, they can offer tobacco, when they go on field trips, to show their respect and appreciation.

ACTIVITIES:

1. Introduction: Students will, through class participation and discussion, brainstorm as to the uses and parts of trees. With the information they already have, students should name as many trees as possible, describing them according to leaves, color, height, bark texture, etc. and identify how Ojibwe people use them today and used them in the past.

2. Students will become familiar with Ojibwe sounds and words through repetition of the Ojibwe names of trees and reservation word list and will develop their own 3 X 5 flash cards with pictures on them.

3. Following a lecture and demonstration of differences in bark, leaves, texture, etc., students will categorize trees by color, uses, size and texture of leaves and bark, to develop skills in grouping, categorizing, and labeling.

4. Students will have library study time to do research on two trees and will write a one-page report that will include pictures and diagrams (or other graphics) that will contribute to better understanding of the report by other students.

5. A short pre-test on the "structure of a stem" will be given to evaluate the degree of knowledge students have of the physical structure of trees.

6. A lecture will be presented by a DNR or conservation resource person on the structure of trees. Students will develop notes on the lecture after which they will diagram illustrations of parts of a tree. Thereafter, there will be a group review of trees, their uses, and comparisons of visual differences.

7. There will be a lecture and class demonstration of bark and how to make kinikinik, as well as a discussion of both its ceremonial and everyday uses.

8. A resource person will demonstrate construction of birchbark baskets, with students participating and constructing small baskets.

9. There will be a final evaluation of Ojibwe language, structure of trees, which trees are found on Ojibwe reservations in Minnesota, differences among trees, etc.

VOCABULARY LIST:

shishigomish	-	maple	wiigiwaas	-	birch
mitogomish	-	oak	mitigwaabaak	-	hickory
azaadi	-	poplar	maanaazaadi	-	balm (balsam)
wiigob	-	basswood	shigwaak	-	Norway
gaawaadag	-	spruce	maskiigwaatig	-	tamarack
zhingob	-	balsam fir	maanazaadi	-	balsam poplar
aagimaak	-	black ash	aniib	-	elm
giizhik	-	cedar	oziisigobiminzh	-	willow
bawa'iminagaawanzh-		pin cherry	zhingwaak	-	white pine
wakikaandag	-	jack pine	wadoop	-	alder
kinikinik	-	red willow			

RESOURCES:

1. Ojibwe Craft Text, by Carrie A. Luford.
2. Local library.
3. Slides.
4. DNR office.
5. Historical societies.
6. Samples of trees, bark, leaves, etc.
7. Contact elders.
8. MIEA office.
9. Chippewa customs.

RELATED CONTENT AREAS:

1. Science
2. Biology
3. Geography
4. Ojibwe Language
5. Art
6. Social Studies

MATERIALS:

1. Nichols, J. & Nyholm, E. (1979). Ojibwewi-Ikidowina: An Ojibwe word resource book. St. Paul: Minnesota Archeological Society.
2. Ojibwe terminology of trees
3. Stem terminology
4. Foster, A. E. & Galligan, M. (1976). Natural science skills for Indian adults. Bismarck, ND: United Tribbes Educational Technical Center.
5. Trees, A Multipurpose Resource

CROSS REFERENCES:

1. Lessons on trees
2. Lessons on seasonal cycles

LESSON PLAN #1

LESSON TITLE: TREES AND THE OJIBWE RESERVATION AND THEIR USES

OBJECTIVES:

1. Students will identify and name in Ojibwe ten trees that can be found on Minnesota Ojibwe Reservations.

2. Students will be able to describe the uses of four trees that can be found on Minnesota Ojibwe Reservations to demonstrate their knowledge of why trees are important to Ojibwe peoples.

PROCEDURE:

1. Teaching strategy used will be discussion through questioning after the major presentation is made by the teacher.

2. Present background information on Minnesota Ojibwe Reservations and the kinds of vegetation that can be found on them with special emphasis on trees. The teacher should point out the many diverse uses that have been found for the trees.

3. To test student knowledge and understanding, they will each be provided with a Minnesota state map handout. Students will be required to identify the different Ojibwe Reservations and will identify at least ten trees that can be found on the various reservations.

4. Students will be given the opportunity to describe the uses of the ten trees that they have identified on their map handouts.

ACTIVITIES:

1. Provide information on the Ojibwe Reservations in Minnesota. Explain how Ojibwe people have adapted to the climate of their environment. With questions guide students through discussion of how people used the environment today and in the past to meet their needs. They should consider physical and spiritual needs.

2. Introduce the names of various trees during discussion. As each is introduced, students should repeat the names out loud several times. Provide pictures of the trees so students can associate the names with them. If the names of the trees describe their uses or characteristics, explain them to the students.

3. Give students a Minnesota map handout, a list of pictures of different trees found in Minnesota and elsewhere in the country. Assign students to identify which trees can be found on Minnesota Ojibwe Reservation lands. Ask students to explain briefly how these trees are used by Ojibwe people.

4. Provide students with drawing paper and ask them to illustrate the uses of four trees that they have identified which can be found on Ojibwe Reservations in Minnesota.

RESOURCES:

1. Minnesota map with Ojibwe Reservations.
2. Overhead map of Minnesota.
3. Ojibwe language list of trees.
4. Book: Chippewa Customs, by Frances Densmore.
5. Book: History of Ojibwe Nation, by William Warren

EVALUATION:

1. Student identification of ten trees that can be found on Ojibwe Reservations in Minnesota.
2. Student ability to explain the various uses of trees that can be found on Ojibwe Reservations in Minnesota through verbal discussion as well as illustrations.

CONTENT EMPHASIS:

Information about Ojibwe Reservations, their environments, natural resources, particularly trees, lifestyles, ways of adaptation to the environment to meet their needs, Ojibwe cultural values and customs.

COGNITIVE EMPHASIS:

Comprehension and understanding of information given; ability to relate information about trees and relating it to other aspects of the Ojibwe environment and lifestyle and practices; ability to recall information, being able to remember the appropriate information in discussion; ability to generalize and form conclusions from given information; being able to gather information, relate it, categorize it, synthesize it and then make a conclusion or generalization about the importance of trees in Ojibwe life and customs.

LANGUAGE EMPHASIS:

Vocabulary development; awareness of the sounds of Ojibwe and the writing system of the language; development in pronunciation of Ojibwe words; listening skills in discussion of trees and their uses; verbalization in English and Ojibwe.

CULTURAL EMPHASIS:

Ojibwe cultural values and concepts concerning the environment and how people can properly interact with nature; ideas on how to effectively use the natural resources of nature; exploration of the Ojibwe world-view and it's relation to how people can live harmoniously in their environment; study of Ojibwe cultural lifestyle and practices in relation to the use of trees from a scientific perspective.

LESSON PLAN #2

LESSON TITLE: THE TREES AND THE OJIBWE: A VISIT BY AN ANISHINABE ELDER

OBJECTIVES:

1. Shown pictures or slides of trees, students will identify 20 names of trees in Ojibwe with 90% accuracy.

2. Student will be able to explain the reasons for offering tobacco to demonstrate their awareness and appreciation for Ojibwe customs in relation to trees.

3. Students will write thank you notes to the elder to show their respect and appreciation and to demonstrate the knowledge and awareness they have gained. Students will write about ten ideas they have learned from the elder.

PROCEDURE:

1. Lecture and storytelling by elder.

2. Elder will utilize unit word list as guide.

3. Elder will present each student with a pinch of tobacco.

4. (Optional) Elder may demonstrate an example of uses of a tree.

ACTIVITIES:

1. Two weeks prior to the lesson, the teacher will ask an available elder to speak in class. The teacher will offer tobacco and a gift to the elder who accepts.

2. Solicit suggested areas of discussion from students to give to the elder. Present this to the elder prior to the visit.

3. Talk to the class on respect and behavior for elders or guests.

4. The elder will explain about traditional uses of trees, respect for those resources, the use of tobacco, and conservation of those resources. (The elder will use Ojibwe names for the trees in lecture).

5. (Optional) The elder will demonstrate some uses of a particular tree.

RESOURCES:

1. Elder/Resource Person
2. Tobacco
3. Gift
4. Honorarium
5. Ojibwe tree list
6. Other materials the elder may need

EVALUATION:

1. Students will list ten things they have learned from the elder.
2. In small groups students will discuss ideas and use of trees as discussed by the elder, to demonstrate their knowledge.
3. Each group will write a thank you letter telling about five of the things they learned.

CONTENT EMPHASIS:

Understanding of traditional uses of trees; conservation techniques by Ojibwe people; appreciation for elders; understanding traditional use of tobacco.

COGNITIVE EMPHASIS:

Knowledge, recall, production, planning.

LANGUAGE EMPHASIS:

Discussion, listening, groupwork, repetition.

LESSON PLAN #3

LESSON TITLE: STUDY OF WIIGWAAS

OBJECTIVES:

1. Students will explain through a class discussion harvesting, storage and preparation of birchbark to demonstrate their awareness and knowledge of the process.
2. Students will list eight of the ten uses of birchbark and explain through discussion two of those uses.
3. Students will be able to say six of the ten Ojibwe terms for the given birchbark products.
4. Students will make a miniature birchbark canoe using birchbark, basswood fiber and willow stems.

PROCEDURE:

1. Lecture: birchbark harvesting, storage and preparation; description of ten uses of birchbark and how they are made.
2. Oral repetition: Ojibwe terms.
3. Demonstration: cutting and stitching techniques in making miniature birchbark canoe.
4. Hands-on activity

ACTIVITIES:

1. Provide a description of birch trees, pictures of birch trees and samples of bark, leaves and branches.
2. Explain and describe gathering of birchbark and its storage and preparation (lecture). Some students may be familiar with the process. Invite them to share their knowledge and experience.
3. Show and explain six tools and other materials used in working birchbark.
4. Show and explain ten birchbark products saying the Ojibwe term for each and writing them on the blackboard. Then, have students repeat and write them in their notes. Students should be able to explain two of these uses as well as naming the products in Ojibwe.
5. The teacher will demonstrate making a miniature birchbark canoe. Each student will then make their own miniature birchbark canoe with the teacher's guidance.
6. As a homework assignment, have students be prepared on the following day to verbally identify six of the ten terms in Ojibwe for birchbark products.

RESOURCES:

1. Densmore, F. (1970). Chippewa customs. Minneapolis: Ross & Haines.
2. Nichols, J. & Nyholm, E. (1979). Ojibwewi-Ikidowian: An Ojibwe word resource book. St. Paul: Minnesota Archeological Society.
3. Picture: Birch tree.
4. Samples of: Birch leaves, tree branch, miniature, birchbark canoe.
5. Tools and related materials: Awl, knife, templates, basswood wiigob, willow sticks, scissors, construction paper.
6. Ten birchbark products or pictures: wigiwaam, canoe makak, winnowing basket, torch, scrolls, decorations and patterns, moose call, trays, firestarter.

EVALUATION:

1. Students will explain in a paragraph the harvesting, storage and preparation of birchbark.
2. Students will list eight of the ten uses of birchbark discussed by the teacher and explain in two paragraphs two of those uses.
3. Students will be able to say orally six of the ten Ojibwe terms for the given birchbark products.
4. Students will make a miniature birchbark canoe using the birchbark, basswood fiber and willow stems.

VOCABULARY LIST:

wiigwaasi-mitig(oog) - birch tree(s)
wiigwaasi-jiiman(an) - birchbark canoe(s)
nooshkaachinaagan(an) - winnowing basket(s)
bimakwemaginigan(an) - traveler's torch(es)
wiigwaasi-emikwan(an) - birchbark spoon(s)
wiigiwaas(ag) - birchbark
wiigwaam(an) - birchbark dwelling(s)
makuk(oon) - box(es) or container(s)
wawaskeshii-waswagan(an)-deer hunter torch
mazinagwajigan(an)- birchbark pattern(s)

CONTENT EMPHASIS:

Traditional harvesting and uses for birchbark and how the birchbark is used.

COGNITIVE EMPHASIS:

Knowledge, recall, application, production.

LANGUAGE EMPHASIS:

Listening, recitation, writing, discussion.

LESSON PLAN #4

LESSON TITLE: USES OF BIRCH

OBJECTIVES:

1. Students will list four ways that the Ojibwe use birch bark with 100% accuracy.
2. Students will be able to restate the methods used in harvesting birch bark on a color worksheet.
3. Student will be able to state the season in which bark is harvested.

PROCEDURE:

1. The lesson will start with an oral review about the previous lessons on trees. The teacher will introduce the poem, "The Tree", by James Mustache Sr.
2. Color worksheets will be given to students to fill out as a class activity.
3. Students will make a birch bark basket.

ACTIVITIES:

1. Color worksheets will be filled out by the students. They may color them if they wish.
2. Students will make a bark basket or canoe. The patterns are included in the materials' section of this unit.
3. The students will fill out an evaluation sheet on birch bark and its harvesting.

RESOURCES:

1. People: an elder from the community.
2. Information: poem "The Tree", information on the uses of birch bark and how to harvest it.
3. Equipment: scissors, punch/awl.
4. Materials: worksheets, birch bark, wiigoob (inner bark of the basswood tree).

EVALUATION:

1. The student will fill out a worksheet about birch bark.

2. The student will be evaluated on attitude.

3. The student will finish his/her bark article.

VOCABULARY LIST:

wigwaasike	-	birch barking	asema	-	tobacco
piskitenaagonan	-	birch basket	wiigwas	-	birch
wiigwas jiimaan	-	birch bark canoe	mitigoog	-	trees
ziigon	-	spring			

CONTENT EMPHASIS:

To teach the uses of birch bark and when/how to harvest it. The birch is to be respected as are all things in nature. We leave an offering of tobacco before harvesting the birch. Handle the birch with care so as not to waste it. We only take what we need. It is only taken in the Spring when it is not as hard on the tree. We always leave some bark on the tree to protect it.

COGNITIVE EMPHASIS:

Comprehension/understanding content of the lesson given. Understanding instruction and following them; recalling information in filling out handouts and completing projects; gathering new information and data.

LANGUAGE EMPHASIS:

Listening and reading skills will be developed. Students will listen for instructions, information and comprehension. They will also read handouts given for information and comprehension.

UNIT PLAN - GROUP V

UNIT: SEASONS AND TREES

THEME:

There is a direct relationship between the change of seasons and the change in trees. The students will draw the relationship between trees and the seasons.

CONCEPTS:

1. The change of the seasons happens in cycles in accordance with the moon changes.
2. Observation of moon change tells of the time of year.
3. Every element of nature has a rebirth and a regeneration.
4. The change of trees is directly related to the change of seasons.
5. All things are interrelated with each other. Moon changes and seasonal changes are intertwined with each other.

GOALS:

1. Through study and observation of seasonal changes, students will gain awareness that trees are living entities.
2. Students will gain an understanding of the process of making maple sugar.
3. Students will gain an awareness of the many uses of birch bark.
4. Students will gain respect and appreciation for cedar as a ceremonial item.

OBJECTIVES:

1. Following a field site visit, students will demonstrate their knowledge by explaining maple sugar processing.
2. Students will be able to identify trees and list the differences of their appearance in each season of the year.
3. Students will draw the relationship between the changing color of the leaves and the fall season, so that fall colors will be associated with the season of fall. This will be reinforced by making a leaf booklet indicating the tree from which the leaf came.
4. The student will develop an understanding and appreciation of cedar as an integral part of ceremonial use by explaining why tobacco offerings are given before taking the cedar.

ACTIVITIES:

1. Students will visit a sugar bush at the local reservation in the month of April. Hugging a tree helps you to release any bad feelings that you may be feeling. Have students do this while on the field trip.

2. Bring birch bark into the classroom after picking it in June when it is prime. Use birch bark to make small items like baskets.

3. List the differences of the cedar, birch and maple taking into consideration the size of each tree, bark, leaves and the soil in which they grow.

MATERIALS/RESOURCES:

1. Wugoob (pieces of birch bark): if unavailable, use paper instead; various leaves from maple and birch trees, clear contact paper, color crayons, illustrations of trees' appearance for the four different seasons, construction paper, markers Ojibwe color book (specific pages copied for each student).

2. Butterfield, R. (1985) Effective Practices of Indian Education. Portland, OR: Northwest Educational Laboratory.

VOCABULARY LIST:

aandegogiizis	-	March	tibikigiizis	-	moon
iskigamizigegiizis	-	April	wiigwas	-	birch
mongogiizis or zaagibagowgiizis	-	May	giizhik	-	cedar
			nooskagjigan	-	willowing basket
wiigoob	-	basswood	wiigwaasike	-	birch barking
shiishiigomish	-	maple	piskitenaagonan	-	birch basket
biboon	-	winter	wiigwas jiimaan	-	birch bark canoe
ziigon	-	spring	waginogan	-	wigwam
niibing	-	summer	asema	-	tobacco
dagogong	-	fall	mitigoog	-	trees

LANGUAGE LESSONS:

Each lesson has a language plan (component) included.

RELATED CONTENT AREAS:

1. Language Arts
2. Oral Traditions
3. Culture
4. Religion
5. Ceremonial
6. Art

MATERIALS:

1. Colored worksheets
2. Birch bark (if available)

CROSS REFERENCES:

1. Oral traditions
2. Philosophy (class with an elder)
3. Religion
4. Science: life science/earth science
5. Language arts/creative dramatics
6. Art projects that relate to trees and seasons
7. Home economics: unit on maple syrup

CULTURAL POINTS:

1. When the moon changes, the month changes.
2. There are 13 months in the Ojibwe calendar.
3. The position of the moon predicts weather to come.
4. The first indication of spring for the Ojibwe is the returning of the crow.
5. You pick birch bark at its prime, which is in June.
6. Cultural knowledge is only given a little at a time.
7. The winter moon (January) can ward off sickness.
8. All things happen in fours (i.e, seasons).
9. An offering of tobacco is given before taking anything from nature.
10. Cedar should not be left on the floor but hung up on the wall.

LESSON PLAN #1

LESSON TITLE: MOONS AND SEASONS

OBJECTIVE:

1. After observing pictures of the different seasons, students will be able to list in Ojibwe, one major activity associated with each moon.

2. After observing four trees in the four seasons, the students will repeat the Ojibwe names for the four seasons to demonstrate proficiency in pronunciation.

PROCEDURE:

1. Show the students the flash cards with activities drawn on them.

2. Identify the objects in the picture "What is this ..." and list the activities for each picture-activity.

3. In questioning students, go from concrete to abstract questions.

4. Help students associate each activity with the appropriate moon/month.

5. Pronounce correctly the name of the four moons and associate four English-named months with the four Ojibwe moons.

ACTIVITIES:

1. The Ojibwe are able to tell the time of year by the cycle of the moon. There is an Ojibwe calendar with 13 moons (months). The Ojibwe derive the name of the various moons by the activity associated with that time of year. An example of this is in the following:

Iskigamizigegiizis	-	boiling sap moon
Apitaniibinowgiizis	-	mid summer moon
Manoominikegiizis	-	riding moon
Apitabiboonigiizis	-	boiling sap moon

2. Repeat the names of the months slowly, carefully enunciating so students can become familiar with the sounds. Ask students to repeat after you as a group and then individually. Call on the more outgoing students in the beginning, then include the less outgoing ones. Make it a point in all class discussions that all are expected to take part.

3. Explain the differences between the Roman lunar calendar and the Ojibwe calendar. The moons and seasons also have English names:

boiling sap moon	-	April	ziigwan	-	spring
mid-summer moon	-	July	niibin	-	summer

ricing moon	-	September	dagwaagin	-	fall
mid-winter moon	-	January	biboon	-	winter

RESOURCES:

1. Fluent speaker of Ojibwe.
2. Flashcards: activities, moons.
3. The Ojibwe Color Book
4. Nichols, J. & Nyholm, E. (1979). Ojibwewi-Ikidowian: An Ojibwe word resource book. St. Paul: Minnesota Archeological Society.

EVALUATION:

Students will participate in the class discussion; proper enunciation will be articulated of Ojibwe words by students.

VOCABULARY LIST:

Apitabiboonigiizis	-	January	biboon	-	winter
Iskigamizigegiizis	-	April	ziigwan	-	spring
Apitaniibinowgiizis	-	May	niibin	-	summer
Manoominikegiizis	-	September	dagwaagin	-	fall

CONTENT EMPHASIS:

Cosmological relationship between natural cycle to seasonal changes.

COGNITIVE EMPHASIS:

Identification, recognition, association, inferences.

LANGUAGE EMPHASIS:

Discussion, repetition, oral skills, listening, comprehension.

LESSON PLAN #2

LESSON TITLE: LIVING TREES

OBJECTIVE:

Students will demonstrate their understanding of seasonal changes by role playing physical changes in trees through the seasons when different seasons are called out in Ojibwe and English.

PROCEDURE:

1. The teacher presents how trees change through the different seasons and how that impacts on people, other plants, animal life and other areas in the environment.

2. Class discussion on seasonal changes and how they relate to the cycle of life with emphasis on trees.

3. Students will be required to repeat the words for the seasons in Ojibwe and associate it with the appropriate pictures of seasons.

ACTIVITIES:

1. The teacher will present background information on the different seasons where the life cycle of trees will be emphasized. In the presentation the teacher will give information on how the seasonal cycle affects trees.

2. Through questioning students, the teacher will associate various activities, scene and climate characteristics to different seasons.

   - Ask students to identify changes in trees?

   - What happens to the leaves in each season?

   - What kinds of characteristics indicate that a different season is coming?

   - What do people do with leaves? What do the changing leaves tell them about the seasons?

3. The teacher will hold up flashcards with Ojibwe words for the different seasons and will say the words both in English and Ojibwe. Students will be required to repeat the words.

4. The teacher will explain role-playing (leaves on a tree) to demonstrate the seasonal changes in trees. Students will stand and role play the changes of trees for the season by using arms as branches and fingers as leaves (e.g. spring - closed fingers; summer - outstretched fingers; fall - dropped hand; winter - shivering).

EVALUATION:

Evaluation of students will judged on the basis of how well they can role play the seasonal changes by imitating leaves on a tree as clues are given in Ojibwe.

LANGUAGE:

1. Comprehension of spoken Ojibwe words and phrases; indicate understanding by making appropriate responses to certain spoken words.

2. Vocabulary development: words for seasons and trees in Ojibwe and English.

3. Pronunciation and enunciation skills when repeating Ojibwe words.

CONTENT EMPHASIS:

The changes in trees throughout the seasonal cycle; what happens to trees and how they change, including characteristics which can be seen and those which cannot.

COGNITIVE EMPHASIS:

Comprehension of English and Ojibwe languages; gathering of information; listening for information. Observing and acquiring pertinent information which will help in the understanding of trees in relation to seasonal cycles; recalling information and relating it to new information to better understand how seasonal changes affect trees.

LANGUAGE EMPHASIS:

Oral language development in pronouncing words correctly; listening skills, recognizing the sounds of words and associating them with their proper meanings; comprehension skills, understanding spoken language and deciphering meanings; understanding the social and cultural meanings of words as well as the literal meanings.

LESSON PLAN #3

LESSON TITLE: THE MAPLE TREE

OBJECTIVE:

Students will observe a sugar bush camp and will then use an illustrated booklet with written descriptions to demonstrate their knowledge of the processing of maple sap.

PROCEDURE:

1. Students will go on a field trip to a sugar bush camp where they will observe the processing of maple sap.

2. The teacher or someone at the camp will provide students with a tour and verbal explanation of tools, activities and the setup of the camp. Students will be encouraged to ask questions and make verbal observations.

3. Before going to the camp, the teacher will make arrangements so students can participate where it is safe to do so.

4. Arrangements should also be made so students can sample the by-products of maple sap.

ACTIVITIES:

1. Before going on the field trip, provide students with background information about maple syrup, maple sugar, maple sap, etc.

2. Give an historical explanation of why maple sap/sugar was important to Ojibwe people.

3. Remind students of the structure of trees and how the seasonal cycle affects the development of maple sap.

4. Provide information explaining how maple sap, sugar and syrup are used today and their importance in Ojibwe life.

5. Instruct the students on proper behavior in the sugar bush camp and also on safety precautions (i.e., staying away from the fire and remaining at a safe distance so they do not get in the way).

6. On their return from the bush camp (or the following day), provide drawing paper, crayons, pencils, etc. and assign students to develop an illustrated booklet (including brief, written descriptions) of their observations at the sugar bush camp and the processing of maple sap. The booklets will be turned in and judged for student knowledge of maple sap processing.

RESOURCES:

1. Elder
2. Sugar bush camp
3. Samples of maple sap products

EVALUATION:

Students will be judged on their knowledge and awareness through the illustrated booklet they will develop following the field trip. The pictures depicting the proper sequence of maple sap processing should be accompanied by a brief, written description.

CONTENT EMPHASIS:

Learning about maple sap processing and a sugar bush camp; familiarity with the cultural customs and practices related to these activities; learning maple tree physiology and the scientific aspects of maple sap processing.

COGNITIVE EMPHASIS:

Language comprehension in English and Ojibwe; observation of maple sap processing and information gathering through observation; recalling information and relating it to newly acquired information to develop their booklets.

LANGUAGE EMPHASIS:

Vocabulary dealing with the processing of maple sap; basic commands and language associated with safety, maple sap processing and with the sugar bush camp; speaking/verbalizing skills in Ojibwe.

SUGAR MAPLE

(Acer Saccherum)

The great maples of North America, a noble family with many tall, handsome and useful representatives flourish in field and forest from the Atlantic to the Pacific and from Mexico to the Arctic Circle. They are among the finest of our "hardwoods" and produce good lumber, including the "curly maple" and "bird's-eye maple" cherished by woodworker. A family trait is that the leaves grow opposite one another on the branchlets, but the real badge of the clan is the fruit, the maple "key" that is really two winged seeds joined together in growth.

The stalwart sugar maples that sometimes reach a height of 100 feet or more are found from the Gaspe Peninsula in Quebec, west to Manitoba, and then on south to the Gulf States. But, they are at their best and most abundant in the mixed forests of the Great Lakes States, New England, and southern Canada. Incidentally, this is the tree that gave Canada its emblem, the maple leaf. It is also the tree that in the northern part of its range, produces the sap that, through spike and bucket and boiling down amid the wild winds and late snows of March and April, becomes the maple syrup and maple sugar of commerce. Where "sap boiling" is a regular spring custom, a grove of these maples -- usually referred to as a "sugar bush" -- is a valued possession. For the most part it is not particularly difficult, even for a beginner, to distinguish one species of maple from another, but it so happens that there is a black maple (Acer nigrum) found over much of the range of the sugar maple. The resemblance is such that some botanists still insist that it is merely a variety of the sugar maple. In any event, they have the same sweet sap and similar keys. However, the leaf of the sugar maple, 3 to 8 inches broad,

usually is 5-lobed, as shown, and firmly flat in contrast to the usually 3-lobed black maple leaf that tends to be droopy at the edges. The name black maple refers to the bark, which is darker than that of the sugar maple are not as coarsely ridged or plated. Also, the black maple prefers rich bottomland while the sugar maple is a climber and likes slopes and well drained uplands. The greenish-yellow flowers of the sugar maple ore not presented in flamboyant clusters like those of the Norway maple but hang modestly and almost shyly on thin stalks or pedicels 2 to 4 inches long amid the early foliage.

COAST OR SOUTHERN WHITE CEDAR

(Chamaecyperis thyoides)

The foliage of this small to medium-size evergreen much resembles that of the arbor vitae or northern white cedar, but the cones are quite different in character. All of the Thuja group have little cylindrical cones that open from the outer end toward the base, and all of the Chamaecyparis clan, including the great Port Orford cedar (Chamaecyparis lawsoniana) of the Pacific Coast, have little globular cones that split toward the center in releasing the seed. As the various common names of this species imply, it is found in swamps and wet ground generally from southern Maine down the Atlantic Coastal Plain to Florida and across the Gulf States into Mississippi. This leaves little ground for confusion with the more northerly arbor vitae. In the comparatively narrow region where their ranges overlap, the difference in the cones will easily distinguish one species from the other. The globular cones of the coast, Atlantic or southern white cedar are about 1/4 inch in diameter.

ARBOR VITAE or NORTHERN WHITE CEDAR

(Thuja occidentalis)

It isn't easy for a beginner to learn to distinguish the arbor vitae or northern white cedar from the coast, Atlantic or southern white cedar at a glance. There are other cedars and cypresses and allied junipers across the country to add to the difficulty. Slow and cautious observation of these evergreens will eventually show their differences. The arbor vitae in the wild is a narrowly pyramidal tree up to 50 or 60 feet in height with flat sprays of heavy foliage consisting of tiny leaves tightly braided along the branchlets. It is most easily recognized by the fruit, as shown, a narrow, upright cone an inch or so in length, opening at the outer end when ripe. This is a northerly tree found in wet ground from Quebec to Saskatchewan and extending down into the United States, climbing higher as it goes southward. It is common in cultivation as a trimmed hedge tree.

WHITE BIRCH; PAPER BIRCH

(Betula papyrifera)

This is one of the most striking and beautiful trees in North America. It prefers a cool climate, and its natural range is the high ground in the northern section of the United States and northward to the Arctic Circle. It grows to be a fairly tall tree, and it stands out in the woods because of the contrast in color between its white bark and the dark bark of the surrounding trees. There are very few native trees with which it could possible be confused, even at a distance. One is the sycamore, whose upper limbs sometimes have a clear, cream-white bark that catches the eye from far away; but the sycamore rarely invades the cool, northern region in which the white birch flourishes, and in the few areas where they may be found on common ground, it is no problem at all to distinguish one from the other on closer inspection. The mottled trunk of the sycamore is nothing like the clear white trunk of this tree, and there are, of course, notable differences in leaf, flower and fruit.

But gray birch and white birch often are confused by novices in the woods. Both trees are birches with white bark, so there is some ground for confusion at first sight. There are, however, two details that easily distinguish one species from the other. The leaves of the gray birch are decidedly triangular in outline with the stalk or "petiole" in the middle of the flat base line. The white birch leaves, 1 to 4 inches long, are shaped, as shown, with the base line of the leaf blade gently curving away on each side of the petiole. But leaves often vary in shape, and if there is any doubt in your mind about the identity of the tree, rub you hand over the white bark of the trunk. If it is a gray birch, your hand will come away clean.

If it's a white birch, the palm of your hand will be covered with a white powdery substance that coat the bark and adds a final velvety touch to its beauty. The handsome bark of this species peels laterally in stirps and discloses a lovely red-brown or sometimes fawn-colored inner bark. Outer and inner bark were used in the making of canoes, and in more modern times they have been fashioned into writing paper, picture frames and souvenirs of all kinds. You may occasionally encounter other white-barked birches, native or imported, but this and the gray birch are by far the most common. Learn them first.

THIS STORY CAN ONLY BE TOLD IN WINTER
LEGEND OF WINOBOJO AND THE BIRCH TREE

There was once an old woman living all alone on the shore of Lake Superior. She had a little girl living with her whom she called her daughter, though she did not know exactly where the child came from. They were very poor, and the little girl went into the woods and dug wild potatoes or gathered rose berries for them to eat. The little girl grew up to be a woman, but she kept on doing the same work getting potatoes and berries and picking up fish that were washed ashore. One day when doing this, she had a strange feeling as though the wind were blowing underneath her clothing. She looked around her but saw no signs of anyone. After a while she went home.

As soon as she entered the house, her mother saw that she looked troubled and bewildered. Her mother asked, "Did you see anyone? Did anyone speak to you?" After a time the mother notice that the girl was with child and questioned her again, but the girl replied as before, that she had seen no one. The only thing strange to her was the sensation of the wind blowing about her which she had described to her mother. When the time came for her to be delivered, there was a sound as of an explosion and the girl disappeared. The woman was heart-broken until one day she found a trace of blood on a leaf. She picked it up carefully and put it beside her pillow. After a while, as she lay there, she thought she heard someone shivering and breathing near her head. She lay still, not knowing what to do. She heard the breathing near her head constantly. As she lay there wondering what it could be, she heard a sound like that of a human being. She said, "I guess I am going to be blessed." As she lay there, a voice spoke and said "Grandmother,

get up and build up a fire. I am freezing." The old woman arose and look around her, and there lay a little boy. She took him up and hugged him.. She got up an made a fire to warm him and behold the child was Winobojo (win a bo'zhoo). Throughout his human life he was a mysterious being with miraculous powers. He grew rapidly and began to help his Grandmother. He dug potatoes and brought fish and berries for her.

One day, when he had grown to be almost a man, he asked his grandmother what was the largest fish in the lake. She replied, "Why do you ask? It is not good for you to know. There is a large fish that lives over by the ledge of rock, but it is very powerful and would do great harm to you." Winobojo asked, "Could the great fish be killed?" His grandmother replied, "No, for he lives below the rocks and no one could get down there to kill him."

Winobojo began to think about this, and he made up his mind that he would learn to fight so that he could kill the great fish. He got some wood and began to make bows and arrows. Then he asked his grandmother if she knew of any bird whose feathers he could put on the arrows to make them effective. The old woman replied, "No, the only bird whose feathers would make the arrows effective is a bird that lives in the sky, at the opening of the clouds. One would have to go up there to get the feathers." Winobojo began to think how he could go up there and get the feathers that he was determined to have. At last he said to himself, "There is no high cliff on the edge of the lake. I will go up there and stay a while."

When he reached the high cliff, he wished that he might change into a little rabbit. So he became a little rabbit and lived there. One day he went on a very high part of the cliff and called to big bird, saying, "Eagle, come here. The bird

flew down and saw the little rabbit playing there. The rabbit was most cunning. The big bird was the Thunderbird, and he alighted on the top of the high cliff, near the little rabbit. Finally he took the little rabbit and flew up, up toward the opening of the sky.

When the Thunderbird came to his nest, he called to his children, "I have brought you something very cunning to play with." His wife spoke to him very crossly and said, "Why did you bring that rabbit up here? Have you not heard that Winobojo is on the earth? There is no knowing what you have picked up." But the little rabbit was very meek and quiet, letting the children play with him as they liked. The big birds were seldom at home as they went away to get food for their children.

All at once, one day, Winobojo began to talk to himself and he said, "These children throw me around as though I was nothing. Don't they know I came here to get some of their feathers?" The next time the old birds went away, he changed into his human form, took a club, killed the Thunderbirds and pulled off their feathers. He hurried around and tied the feathers up in bundles for he was sure the old birds would soon be home. When all was ready, he jumped off. He was not killed because he was a manido (spirit) and nothing could hurt him. He was unconscious for a time after he fell on the earth, but he was not hurt. Soon there was a great roaring in the sky with flashes of lightning. The Thunderbirds were coming after him. Winobojo jumped up when he saw the flashes of lightning and heard the thunder. The lightning was the flash of the Thunderbirds' eyes and the roaring was their terrible voices. He snatched up the bundles of feathers and ran for his life. Wherever he went the flashes and the roaring followed him, but he

held on to the feathers. He had gotten what he wanted, and he did not intend to lose them. The Thunderbirds kept after him, and at last he felt that they were tiring him out. He began to fear that he would be killed after all. The Thunderbirds came so close that they almost grasped him with their claws. He was getting bewildered. They were almost upon him when he saw an old, fallen birch tree that was hollow. He crept into the hollow just in time to save his life. The Thunderbirds almost had their claws on him as he crawled in.

When the Thunderbirds had gone away, Winobojo came out of the hollow birch tree and said, "As long as the world stands, this tree will be a protection and benefit to the human race. If they want to preserve anything, they must wrap it in birch bark, and it will not decay. The bark of this tree will be useful in many ways, and when people want to take the bark from the tree, they must offer tobacco to express their gratitude." So Winobojo blessed the birch tree to the good of the human race. Then he went home, fixed his arrows with the feathers of the little Thunderbirds and killed the great fish.

Because of all this, a birch tree is never struck by lightning, and people can safely stand under its branches during a storm. The bark is the last part of the tree to decay, keeping its form after the wood has disintegrated, as it did in the tree that sheltered Winobojo.

The little short marks on birch bark were made by Winobojo, to the "pictures" on the bark are pictures of little Thunderbirds. It was said that the bark in some localities contains more distinct pictures of the little Thunderbirds than in others.

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